

HEARING IMPAIRED STUDENTS IN A MIDDLE SCHOOL:  
AN ETHNOGRAPHIC STUDY

By

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The purposes of this study were to describe and explain the social processes and cultural themes within a group of hearing impaired early adolescents and to examine the meaning that a middle school context had for these students. The informants included 11 students, their teacher, her aide, and the students' interpreter. The primary focus of the study was on the social interactions that occurred among members of this group. Ethnographic methods in the tradition of cognitive anthropology, specifically, Spradley's Developmental Research Sequence, were used in collecting and analyzing data. Participant observation and in-depth interviewing were the principal procedures used to collect data. The cultural theme for organizing the data into a comprehensive view of the cultural scene can be stated as follows: The students collaborated to maintain a

social context in which hearing impairment was a normal condition. The data were then organized according to the prominent categories in Berger and Luckman's theory of secondary socialization. The students' social processes and the partial reality that resulted from them were determined to be in consonance with Berger and Luckman's theory. Finally, data were examined to determine the nature of students' perceptions of the features of their public middle school. These findings suggested that the students valued and benefitted from the middle school practices of advisor-advisee groups and interdisciplinary teams.

CHAPTER I  
BACKGROUND FOR THE STUDY

Two recent developments in education may have had an important effect on early adolescent, hearing impaired students: the development of the middle school and the enactment of the Education for All Handicapped Children Act of 1975 (PL 94-142). Early in the 1960s, innovative educators recognized the special needs of early adolescents and changed the direction of educational practice to center the curriculum on those needs. This practice has spread nationwide; nearly 12,000 middle level schools were in operation in 1988 ("Recognition of," 1988). With the passage of PL 94-142 in 1975, new educational opportunities were opened to handicapped students. For the first time, large numbers of hearing impaired students were able to attend special and regular classes in public schools. The combination of these two developments resulted in the mainstreaming of some hearing impaired children in public middle schools. This practice has presented both promise and challenge for educators and students. At the present time, there is a compelling need for additional research on hearing impaired students in this unique and important educational context.

Early adolescence has been described as a period of tumultuous change: Early adolescents undergo rapid cognitive, physical, psychological, and social transitions. In Piaget's terms, these young people begin a transition from concrete to formal operations (Brazee, 1983; Toepfer, 1979). They experience spurts of physical growth and, with the onset of puberty, the beginning development of secondary sex characteristics (Lawrence, 1980; Romano & Timmers, 1978). Their social affiliations begin to shift from family to peers (Berndt, 1982). Throughout these periods of change, there is sometimes a great struggle to maintain a sense of self and to develop a healthy self concept (Blyth & Traeger, 1983; Craft & Hogan, 1985). Accommodating these changes poses a challenge for educators. One fundamental reason for the development of middle schools is to address the special needs of early adolescents by matching learning tasks to cognitive ability, providing appropriate physical activities, promoting healthy psychological development, and fostering social interactions (Alexander & George, 1981; Arnold, 1985; Madon, 1966). An important part of this process involves counseling and peer interactions, both of which require genuine and effective communication. Teachers and administrators face significant challenges in addressing the developmental needs of normal early adolescents; the challenge is even greater for those working with hearing impaired students.

The condition of hearing impairment interferes with an individual's ability to acquire spoken language; in turn, this diminished ability to communicate in a normal manner encumbers the education and socialization of people with hearing impairments. Generally, the greater one's hearing impairment, the less one is able to succeed in a regular school setting and to interact successfully with people who hear (Liben, 1978; Moores, 1987).

Until quite recently, the education of most severely and profoundly hearing impaired students entailed segregating them from other students. Because of the low incidence of this handicap, public and private residential schools were called upon to provide education for the majority of these hearing impaired students. In some larger cities, special but separate programs and classes were developed so that hearing impaired students could live at home and attend school in their own communities (Moores, 1987). Both residential and special programs imposed segregation on students; the difference was only a matter of degree.

Public Law 94-142 provides that handicapped students must be educated in the least restrictive environment, and further specifies that this entails educating handicapped students with nonhandicapped students in regular classrooms whenever possible. This has produced substantial effects on the education of hearing impaired students: Now a majority of these students attend local public schools



(Moore, 1987). Some of these hearing impaired students are partially integrated; that is, they receive instruction in both special and regular classes. Generally, a certified teacher of the hearing impaired maintains a class composed of hearing impaired students only. This teacher provides instruction in academic subjects and assists in preparing Individual Education Programs and in coordinating the mainstreaming of hearing impaired students into regular classes. The students who are mainstreamed may be accompanied by an oral or sign interpreter when they attend regular classes, or they may utilize amplification devices, lipreading, and speech skills to communicate with hearing teachers and students. All these options impose unnatural constraints on communication between hearing impaired students and their teachers and hearing peers (Libbey & Pronovost, 1980; Raimondo & Maxwell, 1987).

Because of the recency of the development of the middle school and the implementation of PL 94-142, little research has been conducted on the nature of middle school education for hearing impaired students. Researchers have demonstrated the need for additional qualitative studies of hearing impaired students in public schools (Foster, 1989; Saur, Layne, Hurley, & Opton, 1986). Moore (1978) and Weiss (1986) stated that more ethnographic studies of hearing impaired students in public schools are needed.

### Statement of the Problem

The purposes of this study were to describe and explain the social processes and cultural themes within a group of hearing impaired early adolescents and to examine the meaning that a middle school context had for these students. Although a number of qualitative studies have been conducted to investigate the social interactions of hearing impaired early adolescents in mainstream settings, these were primarily focused on the socialization between the hearing impaired students and their hearing peers. Findings from these studies indicated that socialization between hearing impaired students and their nonhandicapped peers was limited and superficial. The purpose of this study was to investigate and explain the social processes that occurred when hearing impaired students interacted among themselves.

### Methods

Because the purposes of this study were to describe and explain the cultural themes that resulted from student socialization in a middle school context, an ethnographic approach was appropriate. Among the ethnographic traditions, the assumptions and methods of cognitive anthropology were most fitting here. Jacob (1987) described the assumptions of this tradition as follows:

1. Each bounded human group has a distinct system of perceiving and organizing its environment.

2. This cultural knowledge is manifest in the semantic relationships within the language of the group.

3. The most efficient means of studying the cultural knowledge of a group is to study its semantic systems.

Spradley (1979, 1980) provided a comprehensive, systematic method for gathering data, organizing them into categories of semantic relationships, and analyzing the meanings within and across the categories. His Developmental Research Sequence (Spradley, 1979, 1980) was used in this study for collecting, analyzing, and interpreting data. Participant observation, ethnographic interviews, and unobtrusive measures were utilized. A group of 11 students was observed, and interviews with students, teachers, and other relevant members of the school staff were conducted. The study spanned an entire school year. Regular visits that averaged 3 1/2 hours per week were made to the site.

The essence of validity in qualitative research is accuracy in collecting and analyzing data (Kirk & Miller, 1986). The researcher addressed this issue by acknowledging and taking into account his background and biases, devoting sufficient time to the study, gaining informants' trust, and triangulating data (searching for confirming and disconfirming evidence in a variety of situations). The researcher also kept a record of the conditions in which he collected and analyzed data.

### Research Questions

The research methods selected for this study entailed beginning the research with a general focus that resulted from a set of initial questions about the phenomena to be investigated (Jacob, 1987; Lutz & Ramsey, 1974). The questions that guided the early stages of this study were as follows: What are the prominent features of socialization within this group of hearing impaired students? How do these students perceive the middle school milieu? How do nonmainstreamed hearing impaired students perceive mainstreaming? How do these students perceive themselves, given the opportunities for close interaction and comparison with hearing peers? In what ways does a middle school meet, or fail to meet, the needs of early adolescents who are hearing impaired?

### Theoretical Base

Berger and Luckman's (1967) theory of the social construction of reality has been used widely to frame ethnographic research (Magoon, 1977). A central assumption of this constructivist theory is that members of a social group collaborate to structure their socialization and to create and maintain a distinct reality. The nucleus of this theory is that knowledge of the world is socially created and maintained through the interaction of externalization, objectivation, and internalization.

Subjective knowledge, the individual's private reality, may be externalized through human activity. As an example, a preschool teacher may possess knowledge and values about maintaining an orderly classroom environment. Acting from this knowledge, she may discard trash only in the classroom wastebasket. Through this physical activity, she externalizes her subjective knowledge. Because this activity occurs among the other events and objects in the physical world, it takes on the character of objectivity. Her externalized knowledge is objectivated; that is, it is accessible (here, through observation) to her students. There is a tendency for human activity to be repeated; the habituation of an activity strengthens its objectivation, and it becomes even more real to others. In the example, the students observe many instances of the teacher's trash disposal activity over time, and come to accept it as a matter of course. This acceptance of the activity as a routine is internalization. The actor as well as the observer internalize the pattern, and in turn, it tends to act upon all members of the group, including the original actor.

This dialectical process is strengthened when the activity is explained and justified linguistically; in fact, according to Berger and Luckman (1967), true socialization cannot occur without linguistic mediation. In the example, not only does the teacher dispose of her trash in

the wastebasket, she directs her students to do the same. She might state that this is the proper way to behave; she might also give reasons for the behavior. In so doing, the teacher legitimizes the activity for her students and for herself.

Not only is physical activity externalized, objectivated, and internalized; so is linguistic activity. Thoughts externalized in language become objectivated and internalized. That is, knowledge (recipes for performing physical actions in certain ways, definitions for relationships, sanctions, norms, taboos, and so on) takes on the character of fact. It becomes real in that it exerts a force on the ways in which individuals think and behave.

Socialized activity and knowledge are not generally subject to rapid and chaotic change. Once patterns are habituated, they tend to be maintained through legitimation, the process of explaining and justifying them through language. The construction of roles (specifically defined subsets of patterned activity), norms (regulatory schemes of beliefs, values, obligations, and so on), and other structures assist in maintaining the stability of social activity.

Socialization of individuals occurs at three levels, primary socialization, secondary socialization, and resocialization. Individuals are born into a previously constructed social world. They internalize the objectivated

social reality in which they find themselves as though it were natural and inevitable. For most individuals, elements of this primary socialization endure as their basic structure of reality. Secondary socialization occurs as individuals move into a different social context (a school, for example). There they internalize new elements of objectivated knowledge; they perform new patterns of activity, assume new roles, act according to new norms, and learn new legitimations. Secondary socialization is grounded in primary socialization. Rather than replacing the primary social world, the new social context is conditional. It is a partial reality limited to a certain context; it need not be disturbingly alien to the individual's primary social world. Individuals perceive it as distinct from their original social world, yet they may move between the two with relative ease. In contrast to secondary socialization, resocialization requires a complete alienation of individuals from their original social world. Individuals' identities are redefined in terms of the new reality, and their primary socialization is reinterpreted so that it is eclipsed by the new social order.

Because primary socialization takes place in the family, and resocialization occurs only under extreme circumstances (induction into a restrictive religious order or into a radical revolutionary group, as examples), the process of secondary socialization appears to be the most

relevant for explaining what might be found within a group of students in a school. In order to confirm that secondary socialization is taking place, there should be evidence that a cohesive partial reality has been constructed that contains normative, affective, and cognitive components. The six constituents of secondary socialization are

1. Identifiable roles, the conduct in which is governed by norms, should be established.

2. Individuals should act as significant others, confirming and maintaining reality for one or more other individuals in the group.

3. A specialized vocabulary should be evidenced that assists in interpreting and legitimating conduct.

4. There should be some apparatus for maintaining the secondary social reality. Here, linguistic legitimations are obligatory elements; ritual or material symbols may also be found.

5. Some means of socializing new members is essential. This may appear as activity subsumed under a distinct role, or new members may be socialized in less formal ways by older members.

6. Routines and tacit understandings should be operating to maintain the reality of everyday life within the social context.

Berger and Luckman's (1967) constructivist theory is closely compatible with ethnographic methods (Magoon, 1977)



and fortified this study with an added dimension. In addition to supplying a theoretical underpinning for ethnographic research, the posited elements of secondary socialization provided a means of characterizing the quality of the informants' socialization. Because it was established that the informants were maintaining a social reality that included the six constituents of secondary socialization, the assertion that they were engaged in a high level of socialization can be made with confidence.

#### Significance

A number of curriculum theorists, including John Dewey, John Holt, A. S. Neil, William Pinar, Harold Rugg, and Joseph Schwab have considered students' experiences and perspectives to be essential components of curriculum (Eisner, 1985; Oliva, 1988; Schubert, 1986). Educators who understand students' perceptions of school are better prepared to make education more effective. Findings from this study should be especially helpful to educators of hearing impaired students in middle schools. Broader and deeper insights into students' perceptions, their social interactions, and the meanings they have for school may benefit educators in other related contexts, as well.

Educational leaders in all levels of school administration are aware of PL 94-142, and are generally willing to support the development of programs to serve hearing

impaired students; however, they are often not familiar with the educational needs of these students (Brill, MacNeil, & Newman, 1986). Similarly, regular classroom teachers have positive attitudes toward mainstreamed hearing impaired students (Behrens, 1979; Green, 1981; Martin, Bernstein, Daly, & Cody, 1988), yet their knowledge about hearing disorders is low (Martin et al., 1988). Findings from the present study may be useful to educational leaders, especially those in middle schools, who seek to develop or modify programs for hearing impaired students. Regular classroom teachers, especially those in middle schools who have hearing impaired students mainstreamed into their classes, may also benefit from this study.

This study may also prove to be useful for future educational research. Ethnographic studies provide descriptions and explanations of human social behavior (Spradley, 1980); they may reveal information that is otherwise unavailable (Rist, 1975; Wilson, 1977); and they are potentially valuable for contributing to educational theory (Lutz & Ramsey, 1974). All these features are especially important for research in recently developed educational contexts. Initial explanations of behavior are made available, previously undetected phenomena may be revealed, and directions for future research are indicated. At the present time, there are few studies of any kind that are focused specifically on hearing impaired students in

middle schools. In the review of the literature, the researcher did not find any qualitative studies of hearing impaired students in this context. This study may contribute new knowledge about hearing impaired students' socialization in and perceptions of a public middle school. Findings from the study may also assist in identifying topics for future studies.

#### Definitions of Terms

1. "Hearing impairment (is) a generic term indicating a hearing disability which may range in severity from mild to profound; it includes the subsets of deaf and hard of hearing." (Brill et al., 1986, p. 67)

2. "A deaf person is one whose hearing disability precludes successful processing of linguistic information through audition, with or without a hearing aid." (Brill et al., 1986, p. 67)

3. "A hard of hearing person is one who, generally with the use of a hearing aid, has residual hearing sufficient to enable successful processing of linguistic information through audition." (Brill et al., 1986, p. 67)

4. Mainstreaming is the integration of handicapped students into regular academic classrooms and nonacademic activities, either with or without accompanying special services.

5. A special classroom is a classroom in which handicapped students are segregated from nonhandicapped students

so that they may receive instruction from a special education teacher.

6. A cultural theme is "any cognitive principle, tacit or explicit, recurrent in a number of domains and serving as a relationship among subsystems of cultural meaning." (Spradley, 1980, p. 186)

7. Externalization is the expression of subjective knowledge through human activity.

8. Objectivation is the manifestation of human activity as an element of the objective reality perceived by individuals in a group.

9. Internalization is the acceptance of patterned behavior as a social fact by members of a group.

#### Organization of the Dissertation

The following chapters contain a discussion of the review of the literature, the methodology, the findings, and the conclusions and implications. In Chapter II, the review of the research literature in early adolescence, middle school theory and practice, and the mainstreaming of hearing impaired early adolescents is discussed. A discussion of the research methods and related issues appears in Chapter III. Chapter IV contains a discussion of the findings that resulted from the study. Conclusions and implications are discussed in Chapter V.

## CHAPTER II REVIEW OF THE LITERATURE

The purpose of this review of the literature is to establish a background of research and theory to support the present study. A considerable amount of research has been conducted on the nature and needs of early adolescents in the areas of cognitive, physical, psychological, and social development. This work establishes that early adolescence is indeed a period of developmental complexity. The evolution of the middle school has been accompanied by a body of literature that demonstrates how educational practice can be designed and implemented to meet the variety and complexity of early adolescents' needs. In the area of the education of hearing impaired students, two branches of research apply to the present study. First is the treatment of the special needs of hearing impaired early adolescents in the areas of cognition, physical development, self concept, and socialization. Second, the implementation of PL 94-142 has engendered a body of research on the effects of mainstreaming, partial mainstreaming, and related issues that arise when hearing impaired students are placed in the regular education context. Surprisingly few studies have addressed specifically and directly the placement of hearing impaired

students in public middle schools. Finally, a number of qualitative studies have been conducted that apply Berger and Luckman's (1967) theory of the social construction of reality to educational contexts. Although none of these studies are substantively related to the present study, they do indicate that the theory is promising as a means of explaining the social phenomena that may be found in a group of hearing impaired students in a middle school.

### The Nature and Needs of Early Adolescents

#### Cognitive Development

Jean Piaget's fixed-stage theory of cognitive development has been applied to a number of studies that included early adolescents. A pair of British studies (Shayer, Kuchemann, & Wylam, 1976; Shayer & Wylam, 1978) indicated that children in early adolescence experienced rapid development of concrete thinking, but that only 20 percent of them evidenced development of formal operational thinking. In the first of the studies (Shayer, et al., 1976), cognitive processes of nearly 10,000 subjects aged 9 to 14 years were assessed in three types of group tests. The first measured pre-conceptual through late concrete operational thinking, the second measured early concrete through early formal thinking, and the third measured late concrete through late formal thinking. Virtually all subjects completed the first set of tests successfully, and a steady increase over age was observed for the second set (c. 35%

of the 9-year-olds to c. 80% of the 14-year-olds). A gradual increase was observed across ages on the third set of tasks, but by age 14, only 20% of the subjects were successful. In the second study (Shayer & Wylam, 1978), the age range was increased to 16 years. Results of this study indicated that up to age 14 there was no difference in girls' and boys' development of operational thinking; girls' performance did not increase beyond age 14, but boys continued developing for another year. The authors attributed this difference to boys' more frequent prior experiences in tasks involving spatial relationships.

Basing her study on a number of investigations that indicated that the final stages of formal operational thinking may not emerge until late adolescence or early adulthood, Martorano (1977) examined the cognitive performance of 80 females in grades 6, 8, 10, and 12. The subjects were tested individually on Inhelder's 10 formal operations tasks. Results indicated that performance improved steadily with age, and that the greatest differences occurred between 8th and 10th grades. However, although formal operational thinking began to appear during this age period, it was not the characteristic mode of thought. Even a majority of the oldest subjects did not exhibit formal operational thinking consistently.

Stone and Day (1978) found evidence of latent formal operational thinking in a study of 9-, 11-, and 13-year-old subjects. These researchers hypothesized that formal operational abilities, rather than being either present or absent, might also be evidenced in a third (latent) category that could be revealed under certain test conditions. Control groups and experimental groups at each age level were randomly formed from a sample of 28 subjects. All groups were tested twice using the bent-rod task; between the two administrations, students in the experimental group received a brief statement of rules for successfully completing the task. Performance of the nine-year-olds showed little improvement on the second test; performance of the older children in both the experimental and the control groups improved significantly. The researchers concluded that (a) any procedure, either rule or task repetition, that clarified the task for the subject may have improved performance; (b) because only the older subjects showed improvement, they were judged as possessing cognitive abilities that were unavailable to the younger subjects; and (c) the appearance of the latent formal operational competency in the second test indicated that formal operational thinking is more common than earlier believed.

Adelson (1983) conducted two group interview studies of a total of 750 subjects aged 11 to 18 years. A simple scenario was presented, and the subjects were asked



questions on the topics of community, law, principles, psychology, and social order. Generally, younger students (11 to 13 years old) possessed an adequate body of knowledge, but were unable to organize their information effectively. They tended to personalize the discussion topics; they showed little evidence of extrapolating, categorizing, or considering a range of alternatives; and they tended to make contradictory statements. Older students (15 to 18 years old) were better able to apply principles in statements of moral, political, and social judgments; they were able to perceive a variety of alternatives; they were not limited to direct or immediate considerations; and they indicated a comprehension of the functions and relationships of institutions.

Parallel to the findings of research using Piaget's model is Epstein's research in brain growth periodization (Epstein & Toepfer, 1978). According to Epstein's findings, the human brain increases in weight from 350 grams at birth to approximately 1,400 grams at maturity, around 17 years of age. Over the course of this development, there are five discrete periods of accelerated growth at the approximate ages of 3 to 10 months, 2 to 4 years, 6 to 8 years, 10 to 12 years, and 14 to 16 years. Toward the beginning of early adolescence, a period of accelerated brain growth and the corresponding advances in cognitive ability occur. For the remainder of early adolescence,

brain growth is markedly slower; there is a corresponding reduction in the rate of development of cognitive ability. During this period of slow growth, it may be difficult for early adolescents to develop new cognitive processes.

As a group, these studies indicate that early adolescents are cognitively more advanced than older children; that concrete operational thinking is the predominant cognitive mode of early adolescents; and that some formal operational thinking begins to appear, at least for some early adolescents. These findings have important implications for middle school practice. They also suggest that early adolescents may be suitable candidates for interviews, but that care should be taken in selecting and pursuing questions and in interpreting responses.

#### Physical Development

Interest in the impact of physical development and variations in maturational timing has grown in recent years, and results are still inconsistent across the increasing number of studies (Brooks-Gunn, Petersen, & Eichorn, 1985). A study of the effects of delayed puberty and growth retardation in adolescents revealed that only growth retardation had a significant effect on self-esteem (Apter, Galatzer, Beth-Halachmi, & Laron, 1981). Results of this study indicated that retarded growth had a significant negative effect on self-image, but that delayed

puberty did not. Petersen and Crockett (1985) examined the effects of maturational timing and grade level on the adjustment of early adolescents. Biological timing was associated with three factors: Late maturers exhibited greater impulse control than early or on-time maturers, early maturers had significantly higher literature grades, and early maturers evidenced more psychopathology. As students progressed from the sixth through the eighth grades, their academic achievement in four subject areas declined, as did their perceptions of family relations and body image. Their emotional tone and perceptions of peer relations improved during those three years. Steinberg's (1987) study of the effects of pubertal timing on family relationships indicated that as physical maturity increased, perceived closeness with parents decreased; that conflict at puberty was more frequent between adolescents and their mothers than between adolescents and their fathers; and that autonomy for the adolescent increased with physical maturation.

Brooks-Gunn et al. (1985) stated that four age-related factors were relevant in studies of early adolescents: chronological age, biological age, cognitive age, and grade in school. In addition, a number of other factors exerted varying amounts of influence. These included differences between the individual's perception of maturational timing and the actual timing, social context (as an example, being

off-time in groups in which off-time development was common as opposed to groups in which it was rare), social class, family structure, and religion. Certain timing effects were found to be important. Girls who matured early and boys who matured late were found to be at greater risk of experiencing adjustment problems than other children. Early maturation could be disruptive in the developmental tasks of middle childhood.

Sandusky (1983) discussed several less obvious but important factors associated with physical development. During early adolescence, the cartilaginous bones begin the rather lengthy process of ossification. Generally, this process begins around the age of 11 years for girls and 12 1/2 years for boys; it is complete around 14 years of age for girls and 17 for boys. During this transition from cartilage to bony matrix, the new bony structures are thin and less stress-resistant to sheering, tensile, and compression forces. Youngsters during this period are particularly susceptible to athletic injuries and certain overuse injuries associated with overtraining or improper training. Sandusky also pointed out that between the ages of 10 and 16 years, individual differences in structure can vary by as much as 60 months in children of the same chronological age; similarly, differences in height can be as great as 15 inches, and in weight, as much as 90 pounds. When children

in the same chronological age compete in sports, substantial physical mismatching can occur.

Aside from issues of physical development, physical competence may be important in gaining social status (Evans & Roberts, 1987). Basing their discussion on a number of interviews with physically competent and physically inept students and on results of a number of studies of children's physical performance, these researchers concluded that athletic ability contributed substantially to children's achieving status among their peers, especially for boys. Not only was the mere perception of ability important; high-ability youngsters were more likely to assume leadership roles in sports and games, and these roles provided opportunities for developing and strengthening friendships. The authors acknowledged that within the context of sports and games, social competence is also an important element for acquiring social status. They suggested that traditional physical education programs do not adequately address the social and physical needs of children who exhibit low levels of physical performance.

The characterizations of the variables associated with physical maturation support the frequent assertions in the literature that early adolescents undergo physical development at widely differing times and rates. In turn, the physical changes, the differences in developmental rate, and the differences in physical competence exert a variety

of influences on early adolescents' self-esteem and social relationships. These phenomena are addressed by several middle school practices. Also, knowledge of the implications of variations in physical development might prove useful to the researcher who is investigating social relationships in any group of early adolescents.

#### Psychological Development

One important aspect of early adolescent development is the refining of a notion of self and of self as perceived by others. Herzberger, Dix, Erlebacher, and Ginsburg (1981) investigated differences in the nature of self- and social self-concepts from early to late adolescence. These researchers administered a social self-concept questionnaire to a sample of 180 6th through 12th graders and a self-concept questionnaire to a second sample of 155 students in the same grades. The findings indicated that differences across age were quantitative but not qualitative. Early adolescents described themselves and their perceptions of others' impressions of them in sophisticated terms. Their self-concepts tended to be more descriptive and to show more depth than their social self-concepts, and their parental social self-concepts were more descriptive than their peer social self-concepts. In general, early adolescents recognized that others hold diverse opinions, and they were able to set aside their own viewpoints and take on the perspective of others. They were able to

describe their self- and social self-concepts in terms of stable psychological characteristics rather than superficial qualities and behaviors. Also, although peers become increasingly more influential during early adolescence, these students indicated that their parents had more varied, extensive, and intensive knowledge of them than did their peers.

In a more recent study, Hart (1988) investigated the characteristics that older children and adolescents believed to be the most important constituents of a sense of self. The researcher conducted individual in-depth interviews with a total of 64 students in grades 5, 6, 9, and 11 in a middle-class suburban school. Each subject was presented with a hypothetical dilemma in which his or her self was fictionally divided into two new persons, each with a distinct set of characteristics. The subject was asked to select the "new person" that better preserved the subject's identity, and then to give reasons for the choice. The dilemma was repeated twice; in each successive version, the selected set of characteristics of the preceding dilemma was paired with a new set. The four characteristics considered were physical appearance, capabilities and activities, location in a social network, and psychological qualities. A chi-square analysis revealed significant differences across the age groups. More older children (61%) and younger adolescents (71%) believed that

social relations best preserved identity; more 9th graders (66%) and 11th graders (76%) chose psychological characteristics as being essential to identity. Results of this study support frequent assertions in the literature that social relationships are extremely important for early adolescents.

Shirk (1987) investigated the relationship between self-doubt and the development of role-taking ability in older children and early adolescents. The sample included 75 subjects in grades 5, 8, and 11; all subjects were enrolled in the same parochial school. Self-doubt was measured by means of a Likert-type questionnaire; a standardized interview technique was used to assess role-taking ability. Because results on both measures were subject to contamination by social desirability of responses, a social desirability questionnaire was also included. Results indicated that role-taking ability increased and self-doubt decreased with age; social desirability was not influential. The researcher concluded that both role-taking ability and level of self-doubt were associated with age, but that role-taking ability was not necessary for the decline in self-doubt. The generalizability of this study is limited due to the nature and size of the sample; nonetheless, findings are consistent with other studies of role-taking and self-doubt.



Protinsky (1988) examined characteristics of adolescents' self-concept by comparing the level of ego identity achieved by problem and nonproblem adolescents. Rasmussen's Ego Identity Scale, a 72-item questionnaire based on Erikson's theory of human development, was administered to 18 problem adolescents aged 15 to 18 years and 19 nonproblem adolescents aged 14 to 17 years. Nonproblem adolescents exhibited significantly higher degrees of general ego identity, trust, initiative, and identity than the problem adolescents. Protinsky contended that identity achievement in this sample was more closely associated with trust, initiative, and identity than with autonomy and industry. Comparison of scores and subject demographics indicated that students who had a higher degree of identity tended to come from two-parent homes. Although the results of this study should be generalized only with caution, the findings indicate that Erikson's theory is useful in characterizing self-concept.

Manning (1988) applied Erikson's work in a theoretical consideration of early adolescent development. Early adolescents function in two Eriksonian stages, Industry vs. Inferiority (6 or 7 years to 11 or 12 years) and Identity vs. Role Confusion (11 or 12 to 18 years). Resolution of the Industry vs. Inferiority crisis requires positive self-perception of competence in academic, physical, and social tasks. The perceptions of peers, as well as parents and

other adults, are important as measures of success or failure during this stage. Early adolescents entering the stage of Identity vs. Role Confusion begin to acquire an idealistic outlook and to question issues and personal accomplishments that they previously accepted or ignored. In beginning to develop a new sense of self, the early adolescent contrasts the self that he or she perceives, the self others perceive, and a notion of an ideal self. The adoption of idols, heroes, and cliques is common early in this stage. The author grounded these characterizations of early adolescents in other theoretical works and in observations made by educators.

Newman and Newman (1988) also applied Erikson's notion of identity in a theoretical description of early adolescents' role experimentation. Children have been socialized into the relatively narrow range of roles, values, and lifestyles of their immediate families. As they enter the period of early adolescence, they become aware of a wider variety of roles, values, and lifestyles that they are now able to explore symbolically. Not only might early adolescents begin to question parental values, they also focus their energies on contemporary issues that can change rapidly. This feature of role exploration operates at cross purposes with adults' exhortations for responsibility and commitment.

In order to explore societal influences on the development of self-concept of early adolescents, Urbansok-Eads (1981) utilized questionnaires and sociograms with a sample of 200 eighth graders ranging in age from 12 to 16 years. Two groups of students, one from mid- to upper-middle class backgrounds and the other from lower class backgrounds, were studied separately; results from the two groups were then compared. Prominent findings common to both groups included concerns with popularity and preferred activities. Factors associated with popularity included social competence, dependability, and personal hygiene. Bases for rejection included sloppiness, deviations from norms for acceptable behavior, and lack of social competence. Athletic activities were preferred over all others. Both groups ranked parents first and peers a close second as the most influential persons in all aspects of their lives.

Taken together, these studies suggest that self-awareness and self-confidence increase during early adolescence; that developing social skills play an important part in defining the self; and that socialization within family and peer groups makes substantial contributions toward the acquisition of the notion of self. Such findings as these have informed middle school practice; they also raise potentially useful issues for the researcher who intends to study early adolescents as individuals and as participants in social groups.

### Social Development

In a discussion of the development of social skills, Newman (1976) emphasized the importance of linguistic ability. According to this author, as children acquire language, they use it instrumentally to regulate events in the environment. As they engage in social interactions, children's egocentricity begins to diminish: They learn about others' points of view in their social exchanges. Older children and early adolescents acquire knowledge of social norms and realize the importance of bringing their behavior in line with that of others. These individuals also learn the importance of and acquire skills for making compromises in interactions with others. With these enhanced skills, they are better able to solve problems without conflict and to engage in a wider range of conversations.

In a comprehensive treatment of the nature of early adolescent friendships, Berndt (1982) noted that these relationships are of critical importance for personal and social development. Three general explanations have been advanced to account for the significance of friendships at this age: (a) friendships may be formed and maintained in order to comprehend and cope with the biological changes of puberty; (b) as early adolescents begin to acquire independence from their parents, they form egalitarian relationships with peers; and (c) the advances in cognitive ability

at this age allows early adolescents to take the role of others, understanding their feelings and the importance of reciprocity in friendships.

Berndt (1982) also asserted that intimacy between friends is deeper and more important in early adolescence than in childhood. Early adolescents frequently state the importance of sharing intimate feelings and thoughts with friends, they value friends' advice and support, and they gain a considerable amount of intimate information about their friends. Intimacy may be important for developing self-esteem and social skills, and for reducing early adolescents' anxieties about the physical and emotional changes they experience.

Berndt (1982) pointed out that mutuality in friendships appears to remain stable from childhood through early adolescence except in explicitly competitive situations. Early adolescents may value equality more than younger children, and view intense competition as potentially disruptive to friendships.

Early adolescents tend to select friends and maintain friendships on the bases of certain types of similarity (Berndt, 1982). Friends are likely to have similar orientations toward school, and they tend to adopt similar elements of contemporary teen culture and conform to similar behavioral norms. Occasionally, friendships form on

the basis of a specific interest that partners have in common.

A comparison of interactions between boys revealed that a number of distinct verbal and nonverbal behaviors were more common between friends than between acquaintances (Newcomb & Brady, 1982). In this study, 60 second-grade and 60 sixth-grade boys were randomly selected and divided into mutual friendship pairs and acquaintance pairs. Each pair was presented with a series of puzzle tasks that allowed independent manipulation, or required cooperation or competition. Significant findings were that friends talked more than acquaintances, discussed more task-related information, attended more closely to partners' discourse, issued and complied with more mutually oriented commands, and exchanged more nonverbal affective expressions. Few differences between the measures of second-grade and sixth-grade friendships were found, indicating that these types of interactions are acquired early and remain fairly stable over time.

General characteristics of early adolescent and adolescent friendships were examined in a recent study (Tedesco & Gaier, 1988). A total of 204 public and parochial school students in 7th, 9th, and 12th grades responded to a 10-item open-ended questionnaire. Their responses were classified into three categories of friendship factors, interpersonal (character traits, intimacy, social conduct),

achievement (academics, athletics, social planning), and physical appearance. Interpersonal friendship factors dominated the responses of all students; and across grade levels, the interpersonal dimension grew steadily in importance whereas the achievement and appearance factors declined. These results are consistent with Berndt's (1982) conclusion about the importance intimacy has in the friendships of early adolescents.

These studies indicate that although several elements of friendship appear in childhood and remain stable over time, other friendship factors become stronger and more important during early adolescence. Although close friendships seem to be especially meaningful to early adolescents, social interactions of a less intimate nature are also important. A number of strategies have been put into practice in middle schools in order to promote socialization among early adolescent students. The awareness of these elements of interpersonal development among early adolescents is essential to any researcher who intends to examine the social relationships of middle school students. Awareness of the relationship between language and the development of social skills is also particularly relevant for the researcher who plans to study hearing impaired early adolescents.

Addressing the Needs of Early Adolescents  
in the Middle School

The central principle in middle school philosophy has been to develop schools that are responsive to the diverse and urgent needs of early adolescents (Alexander & George, 1981; Lipsitz, 1984). The biological changes that occur during this period of life are greater than at any time other than infancy (Lipsitz, 1984). Cognitive changes allow early adolescents to examine with greater intellectual power the changes in their physical growth and pubertal development (Lipsitz, 1984); the early adolescent can contemplate his or her identity in the dimensions of the actual self, the self as perceived by others, and the ideal self (Manning, 1988); and as a fuller notion of self as participant in social groups emerges, early adolescents begin to evaluate and reevaluate beliefs, values, and lifestyles of parents and peers (Newman & Newman, 1988). Over the course of approximately 2 1/2 decades, middle school leaders have applied numerous educational theories and alternative instructional models toward the end of accommodating schooling to the needs of early adolescents. Some of the innovative practices have flourished, others have withered, and some traditional practices persist despite research findings that indicate that they are questionable or unsound for use with middle school students (Arnold, 1982; Aromi, Roberts, & Morrow, 1986; George, 1983).



Among the purposes of the present study were to determine which middle school practices were salient for a group of hearing impaired early adolescents and to explore the meanings that those practices held for the students. To this end, knowledge of common middle school practices was essential to assist the researcher in framing observations and in selecting and pursuing certain questions for interviews.

#### Meeting Cognitive Needs

Middle school educators have turned a considerable amount of attention to the nature of cognitive development during early adolescence. Research in cognitive development indicates that (a) early adolescents advance steadily through certain substages of concrete operational thought, (b) this development varies in timing and rate across the population, and (c) comparatively few early adolescents experience development of formal operational thinking (Martorano, 1977; Shayer et al., 1976). A variety of responses to this research have been suggested in recent years. Early adolescents operating at concrete cognitive levels might profit from discovery learning, creative problem solving, and interaction with students at higher levels of cognitive development (Steer, 1980). Brazee (1983) stated that traditional instructional procedures and many of the textbooks and other educational materials used with early adolescents require formal operational thinking. Arnold

(1985) pointed out that less than one percent of all commercial educational materials have been systematically field tested and revised. Both these authors suggested that teachers modify instruction so that new information is presented in a concrete manner and then explored in a variety of ways accessible to concrete thinkers. Hester and Hester (1983) called for the use of a variety of holistic and experiential activities that allowed students to operate at concrete levels of thought. Strahan and Toepfer (1984) proposed that guided instruction procedures, in which learning progresses from the concrete to the abstract, would be appropriately responsive to early adolescents' needs. These authors also cautioned that under-challenging students might well be as detrimental as over-challenging them. Strahan (1985) argued that optimum learning might be achieved by assessing students' readiness for learning at different cognitive levels and then matching instruction to the ability levels identified for students.

The quality and quantity of these recommendations that have been put into practice varies across middle schools (Aromi et al., 1986). A number of common middle school practices have been found conducive to meeting early adolescents' cognitive needs. Exploratory programs provide a wide range of activities that can appeal to the variable interests of middle school students; students also have

opportunities to apply basic skills in a variety of settings, and to develop the ability to interrelate the knowledge they have acquired (Schneider, 1986). Community involvement activities also appeal to a wide range of interests and allow students to apply and generalize their academic skills; in addition, students gain important social and pre-vocational skills (Alexander & George, 1981; Arnold, 1985). Advisor-advisee programs and interdisciplinary units provide opportunities for students to develop and apply a variety of problem-solving skills (Alexander & George, 1981). All of these practices also allow different students to work at different cognitive levels, and they provide opportunities for teachers to assess cognitive performance informally.

#### Meeting Physical Needs

Middle school educators have sought to address the issues of physical growth and development of early adolescents in a number of ways. Changing the organization of grade levels is a common practice. Because the onset of puberty occurs at earlier ages now than previously, most middle schools include sixth grade, and a number include fifth grade, in order to achieve more common and appropriate school populations (Lipsitz, 1984; Toepfer, Lounsbury, Arth, & Johnson, 1986). Some middle schools have extended this practice to include internal organization, grouping students according to developmental levels (prepubescent,

pubescent, and adolescent) rather than according to chronological age (Alexander & George, 1981).

A much more controversial issue in middle school practice concerns the nature of planned physical activities. Although research in physical and psychological development cautions against certain types of strenuous athletic competition for early adolescents (Redfearn, 1981; Sandusky, 1983), interscholastic competition is still common in middle schools. Intramural athletics (Romano & Timmers, 1978) and modified physical education curricula (Pangrazi, Darst, Fedorchek, & Coyle, 1982) have been adopted as alternatives by a number of middle schools. Such alternatives allow virtually all students to participate in physical activities designed to develop fitness, skills, and cooperation; and students are able to develop physical skills at their own rates.

#### Meeting Psychological Needs

The establishment of one's identity is critical in human development, and the early adolescent is placed in a unique set of circumstances that may have important implications for the development of self-concept. A number of middle school practices foster the development of students' self-esteem. Exploratory programs allow early adolescents to explore and develop their individual interests and abilities, and to acquire a more accurate and positive self-image (Bloomer, 1986; Gatewood, 1975; Schneider,

1986). Intramurals and physical education programs that offer a wide variety of physical activities allow all students to participate at their individual ability levels (Gatewood, 1975); the ensuing increase in physical competence contributes to the development of a more positive self-image (Evans & Roberts, 1987; Gatewood, 1975). Several of the grouping procedures used in middle schools foster the growth of positive self-image. The interdisciplinary team organization provides students with a familiar social context of a size conducive to the development of personal identity, and advisor-advisee groups and multi-age grouping further enhance the positive effects of familiarity and consistency (Alexander & George, 1981; Beane & Lipka, 1979).

#### Meeting Social Needs

Middle schools make a variety of provisions for promoting the development of social skills among early adolescents. The grouping of students who are undergoing similar developmental changes provides them with a relatively calm and secure context in which to achieve social development (Toepfer et al., 1986). Even greater benefits to socialization accrue when such small-group practices as interdisciplinary teaming and advisor-advisee programs are used effectively (Doda, George, & McEwin, 1987; George, 1980, 1982). These practices allow students to interact consistently with a familiar group of peers and adults. Over

time, students develop a sense of cohesiveness and personal identity within such groups.

Certain small-group learning strategies have been shown to promote the development of an array of specific social skills. Group learning projects promote social interaction and cooperation (Drinkard, 1986) and greater concern for the accomplishments of others (Hollifield, 1984). These practices also allow students of different ability levels to work together comfortably (Padak, 1988) and assist in developing student role-taking abilities (Nickolai-Mays & Goetsch, 1986). Peer tutoring and cooperative learning increase participants' positive attitudes toward school and toward members of other ethnic groups (Sharan, 1980). These two strategies also foster the growth of trust and acceptance (Leming, 1985).

Clasen and Brown (1987) investigated five aspects of peer pressure as perceived by middle school students: interaction with peers, involvement in school, involvement with family, conformity to crowd norms, and misconduct. The findings of particular interest are that (a) all subjects perceived pressure in each of the five areas; (b) peer pressure was directed toward both socially acceptable and socially unacceptable behaviors; (c) pressure differed in strength across grade levels and groups; and (d) groups alienated from school perceived less pro-social pressure and more pressure toward misconduct, whereas groups more

closely associated with school perceived more pressure for school and family involvement. The researchers made several recommendations for middle school practitioners. Understanding the diversity of groups and their norms could assist educators in planning a variety of school activities that appeal to a broader range of students. Knowledge of pressures perceived by alienated groups could be used to counter the tendencies of those students to drop out of school. Also, knowledge of the nature and dynamics of peer pressure could be beneficial in counseling students in managing peer pressure effectively and in directing pressure toward constructive ends.

Clark and Clark (1987) examined three broad studies of schools, Goodlad's A Place Called School (1984), the NASSP National Study of Schools in the Middle (1983), and Lipsitz's Successful Schools for Young Adolescents (1984), and derived from them a list of recommendations for middle school practice. The authors asserted that along with academics, diversity and responsiveness are equally important elements of middle school education. Among their recommendations for middle school educators were (a) critical examination of recommendations for eliminating everything but basic academics; (b) careful study of research in early adolescent characteristics, especially in the areas of transition, self-esteem, cognition, and social, emotional, and physical development; (c) dissemination of

information about successful middle school practice; (d) long-range planning that includes responsiveness to the needs of early adolescents; and (e) continued education of parents and teachers in the nature and needs of early adolescents.

Preparing teachers to work with early adolescents is another means of meeting students' developmental needs. Preservice and inservice instruction in the nature and needs of early adolescents has received varying amounts of attention (Fielder, 1978; Georgiady & Romano, 1981). There are indications that adequately informed teachers are necessary for many middle school practices to be optimally successful (George, 1983).

#### Characteristics of Hearing Impaired Early Adolescents Cognitive Development

The cognitive performance of hearing impaired individuals has been studied for decades. Early in this century, the entire population was characterized as possessing inferior intelligence; toward the middle of this century, the hearing impaired were believed to be limited to concrete levels of cognitive functioning; and current studies indicate that the intellectual functioning of hearing impaired persons corresponds to the normal range of intelligence in the hearing population (Moore, 1987). The disparity across these trends has been attributed to changes in conditions of test administration, primarily in



communicating directions effectively to subjects, and in focusing the test content on nonverbal tasks in order to rule out contamination from delayed acquisition of English (Moore, 1987). Despite the current optimistic perception of the cognitive abilities of hearing impaired children, the academic achievement of the population is substantially lower than that of hearing children (Moore, 1987; Trybus & Karchmer, 1977).

A study comparing the performance of deaf and hearing adolescents on three Piagetian formal operational tasks indicated that deaf subjects who began acquiring sign language during infancy performed as well as their hearing counterparts (Twilling, 1984). All hearing subjects had normally hearing parents. Half of the deaf subjects had hearing parents, and received little exposure to any form of manual communication before entering school. As a group, these students performed at lower levels than hearing subjects. Within this group of hearing impaired students, those who had superior linguistic skills performed better on the Piagetian tasks than did the subjects who functioned at lower linguistic levels. The other half of the hearing impaired subjects had deaf parents. These subjects were exposed to American Sign Language from infancy; their performance was comparable to that of the hearing subjects. However, relationships between the hearing impaired subjects' performance on the Piagetian

tasks and their performance on math and reading tests indicated that they were seriously underachieving in school.

A study of 352 Israeli children indicated that deaf children were capable of operating at levels of abstraction similar to those of hearing children, but that their acquisition of abstract cognitive styles was delayed (Zwiebel & Mertens, 1985). Subjects in the study included 251 deaf children aged 6 to 15 years, and 101 hearing children aged 10 to 12 years. All children were given the Snijers-Oomen Nonverbal Intelligence Test, which employs manipulable objects and pictures to measure motor-perceptual, memory, concrete, and abstract thinking skills. Comparisons of the performance of the 10- to 12-year-old deaf and hearing subjects indicated that the deaf subjects' abstract thinking component was weak or absent, but hearing subjects exhibited the use of abstract thinking. An abstract thinking component similar to that of the hearing subjects was evidenced by the older (13- to 15-year-old) deaf subjects. The authors' interpretation of these results was that no differences existed in the pattern of cognitive development of deaf and hearing children, but that their rates of development did differ. The researchers suggested two possible explanations for this difference. Either the advanced oral training skills (the only communication system used with the hearing impaired in Israel) of the

older students contributed to their acquisition of abstract cognitive skills, or parental restrictions of deaf children's social and physical experiences caused experiential deficits that contributed to the lag.

Braden (1985) performed post-hoc statistical analyses on scores of normative samples on a number of intelligence tests in order to compare the intellectual functioning of deaf and hearing subjects. Collectively, these tests were administered to a total of 5,292 subjects ranging in age from 6 1/2 to 17 years. Data from both the hearing and deaf normative samples' performance on the WISC, the WISC-R, and the HNTLA were analyzed by means of principal factor analysis. The similarity of first principal factors extracted from the deaf and hearing samples indicated that nonverbal intellectual functioning was virtually identical for deaf and hearing subjects.

Results of a comprehensive series of measures, including audiological, intelligence, academic achievement, and personality testing, suggested that any degree of hearing loss places children at risk for language and learning problems (Davis, Elfenbein, Schum, & Bentler, 1986). Subjects for this study were 40 hard of hearing students aged 5 to 18 years. Subjects' performance IQ ranged from 85 to 125; hearing losses for 38 subjects ranged from 15 to 73 dB. Analysis of results showed strong correlations between hearing loss and verbal measures and between academic

achievement and verbal measures. The sample was small, and the researchers acknowledged that the generalizability of the results might be limited. However, their conclusions are consistent with other current findings.

Taken together, these studies indicate that (a) the population of hearing impaired children is heterogeneous, and the effects of hearing loss vary from child to child; (b) the educational deficits experienced by the average hearing impaired child are related to delayed development of verbal skills; and (c) children with any degree of hearing loss appear to be at risk for delayed language development and academic achievement. Only one study (Loeb & Sarigiani, 1986, discussed below, pp. 50-51) allowed researchers to detect whether hearing impaired students recognized any of these differences in communicative skills and academic performance. There is a need for more studies of this type, and for studies that explore how any acknowledged differences have meaning for hearing impaired students.

#### Physical Development

Among nonhandicapped children, physical competence is among the factors that influence peer relations, especially among boys (Evans & Roberts, 1987). It is a reasonable assumption that if differences in physical performance are detected among hearing impaired children, they could be included in the constellation of factors that influence the

general level of social acceptability of these children by their hearing peers. A number of studies of the physical abilities of hearing impaired children have been conducted. These studies report a variety of results.

Lindsey and O'Neal (1976) compared the dynamic and static balance skills of 31 deaf children and 77 hearing children 8 years of age; the deaf children failed significantly more tests of both types of skills. In a study of motor proficiency of 154 deaf children aged 7 to 14 years, deaf children's performance on motor skills requiring balance were generally lower than that of hearing children (Brunt & Broadhead, 1982). The magnitude of those differences was substantially less for older deaf children, however. Similar improvements in performance of older deaf children were found in two studies of 132 deaf children aged 3 to 14 years (Butterfield, 1986; Butterfield & Ersing, 1986). In contrast to these studies, no significant differences in motor proficiency of hearing impaired and hearing children were found by Schmidt (1982), and few significant differences were found in a comprehensive test of physical fitness administered to 1,045 hearing impaired and 686 hearing subjects aged 10 to 17 years (Winnick & Short, 1986).

Two studies indicated that hearing impaired children exhibited superior performance in fine-motor skills, as measured in drawing tasks (Brunt & Broadhead, 1982; Cratty,

Cratty, & Cornell, 1986). Cratty et al. (1986) found that this difference diminished with age, whereas Brunt and Broadhead (1982) found that the superior performance of their hearing impaired subjects was greater for early adolescents than for younger children.

Collectively, these studies suggest that (a) by the time hearing impaired children reach early adolescence, their gross-motor physical competence may not differ significantly from that of hearing children; (b) if differences do exist, they are likely to be of lesser magnitude than those detected in younger hearing impaired children; and (c) hearing impaired early adolescents may exhibit superior fine-motor skills on certain types of tasks. However, there is no indication that studies have been conducted to investigate the meanings that hearing impaired children have for these differences; that is, whether the differences are detectable by hearing impaired children themselves, and if detected, how they are interpreted.

#### Psychological Development

The importance of establishing one's identity is a fundamental psychological concept; the development of self-concept and its evaluative component, self-esteem, occurs within a context of social interaction (Meadow, 1980). A large majority of hearing impaired children are born to parents who hear, and many of their social interactions beyond the family are conducted with hearing people. If

the condition of hearing impairment is devalued by others in the social context, or if communication between the hearing impaired child and others is difficult, normal development of self-concept and self-esteem may be disturbed.

Loeb and Sarigiani (1986) compared elements of self-esteem among hearing impaired, visually impaired, and non-handicapped students. By including visually impaired students in the study, the researchers were able to compare hearing impaired children with children having other sensory impairments as well as with nonimpaired children. For the hearing impaired students, the variables of severity of hearing impairment, age of onset, gender, and race were included. The researchers selected 250 children ranging in age from 8 to 15 years from metropolitan Detroit public schools; 64 had hearing impairments, 74 had visual impairments, and 112 had no significant sensory impairments. The researchers used a modified form of the Nowicki-Strickland Children's Locus of Control Scale, a Q-sort self-satisfaction measure, the Piers-Harris Children's Self-Concept Scale, a tower-building task, and a 5-item sentence completion task on children's likes and dislikes and their attitudes toward sensory impairments. All measures have been found suitable for use with hearing impaired children. ANOVAs and follow-ups were used to analyze data, and a number of significant differences between the hearing

impaired children and the two other groups were found. First, within the hearing impaired group, girls had lower self-esteem and were more anxious than boys, and blacks had greater internal locus of control than whites. Children with early onset of hearing impairment expressed a greater degree of satisfaction with self, yet lower perceptions of popularity with peers. Among the self-perceived problems of hearing impaired children as a group were that they had difficulty making friends, they were not popular, and they were infrequently chosen as playmates. They perceived weaknesses in and low expectations for their academic performance; fortunately, most did not report a feeling of global inability. Also, the hearing impaired children more frequently reported feeling sad because of being called names, and they preferred nonsocial activities to being with family and friends. Despite these somewhat grim perspectives, the hearing impaired children did not differ from the other groups on the Q-sort measure of overall self-satisfaction.

Warren and Hasenstab (1986) conducted an exploratory study of the self-concept of 49 deaf children and their parents. The children were aged 5 to 11 years, and all were students in public schools. Variables included were age, gender, etiology, age of onset, communication methods, socioeconomic status, and parents' approach to child-rearing. The Picture Game, a nonverbal indicator of



self-perception, was used with the children; the Maryland Parent Attitude Survey was used to determine parental attitudes toward child rearing. Because of the nature of the study, levels of significance for data analysis were low (.10 and .20). Among the variables studied, parental attitudes toward child rearing correlated most highly with the children's self-concept. Indulgence, protection, and rejection were associated with low self-concept, and discipline was associated with higher self-concept. The authors suggested that these findings are consistent with theories that associate parent-child relationships with development of self-concept.

In a study of 51 residential hearing impaired students 14 to 18 years of age (Brooks & Ellis, 1982), researchers explored relationships among self-esteem, social self-concept, age, gender, degree of hearing loss, and labeling. Students rated themselves and their impressions of others' perceptions of them on an 11-item Likert-type scale. The most prominent findings were that the self-esteem of hard of hearing subjects was more positive than that of deaf subjects, that hard of hearing students' perceptions of others' evaluations of them were more positive than those of the deaf, and that the latter differential perceptions explained most of the variation in self-esteem. The researchers cautioned that these differences may be significant only in similar circumstances in which a negative

ascription is assigned to hearing impairment and when degrees of impairment are differentiated.

A study of deaf late adolescents revealed a significant relationship between parental hearing status and self-esteem (Yachnik, 1986). Fifty-six deaf university students and their parents participated in the study; 28 sets of parents were deaf and the other 28 were hearing. A modified version of the SDQ III, a self-esteem questionnaire with 102 Likert-type items, was used. Global self-esteem and the self-esteem components of academic, parent-child, physical appearance, physical ability, same sex, and opposite sex self-esteem were measured in this study. Deaf children of deaf parents had significantly higher scores on global self-esteem and on the components of same sex and opposite sex self-esteem. Differences were also found in parents' ratings of their children: Deaf mothers' ratings of their children were significantly higher than those of hearing mothers for global, parent-child, physical appearance, and opposite sex; and deaf fathers' ratings of opposite sex self-esteem was significantly higher than that of hearing fathers. Besides parental hearing status, other variables were examined: subject gender, socioeconomic status, and prior educational setting (residential or public school). There were no significant differences and no interaction of group by any of the latter three variables. Because of the ages and nature of the subjects, it

is risky to generalize the findings of this study to hearing impaired early adolescents. Still, the author's interpretation of the findings may prove useful: A possible explanation of the results was that social relationships outside school may be different for the two groups. Deaf children of hearing parents may experience alienation more often in their more frequent interactions with hearing persons and perhaps even at home, as well.

There are indications that hearing impaired children exhibit lower self-esteem than their hearing peers, and that there are differences within the hearing impaired population. The importance of these differences is speculative, and questions remain about the characteristics and development of hearing impaired children's self-concept. Still, the existence and nature of these differences extend the background for the present study and indicate a need for additional research.

#### Social Development

Several studies of the socialization of hearing impaired early adolescents have been conducted. The majority of those studies either compared social skills of hearing and hearing impaired youngsters or examined the social relationships between members of the two groups. (The latter strand of research is treated separately below.)

Rachford and Furth (1986) compared ideas of friendship and knowledge of social rules expressed by hearing impaired

and hearing students. The sample consisted of 120 volunteers aged 9-10, 13-14, and 17-18 years. All students were interviewed individually on two sets of questions, one concerning the nature of friendship and the other, the nature of social rules. Generally, the responses of hearing impaired students were similar to those of hearing students, but showed a developmental lag: Their scores were lower on both question sets. Differences in some specific items are of interest. Hearing impaired students reported that friends talked about nonpersonal matters, and matters of self-disclosure were reserved for conversations with parents; the reverse was true for hearing students. In discussing conflict, hearing impaired students more often reported avoiding attempts at direct resolution rather than attempting to compromise. Also, they viewed themselves less often as rule makers and rule changers. The lag in early adolescent hearing impaired students' understanding of friendship disappeared in adolescence; however, hearing impaired students' lag in understanding social rules persisted into adolescence.

Macklin and Matson (1985) compared the social behaviors of hearing and hearing impaired children aged 8 to 14 years. Thirty hearing impaired children in a residential school were selected for the study; they were matched with 30 hearing students on the basis of gender and age. Students' homeroom teachers rated the subjects' social

behaviors on the Matson Evaluation of Social Skills with Youngsters, a 57-item Likert-type scale. Findings indicated that hearing impaired students possessed a number of very positive social behaviors, but that some of those differed from the positive social behaviors exhibited by hearing students. Two important differences were that hearing impaired students were judged to be less assertive than hearing students and that they were more likely to think others were picking on them.

In a study of adolescents' social perceptions, several differences were found between deaf and hearing subjects (Schiff, 1973). The sample included 113 deaf and 48 hearing students aged 12 to 19 years. Subjects viewed schematic cartoons of facial expressions and then interpreted the affect they perceived in the faces. Deaf subjects tended to judge angry facial expressions as less extreme than hearing subjects; hearing subjects extracted more information from eye-contact stimuli. The author interpreted the latter finding as particularly interesting because of the importance of eye-contact information in regulating social behaviors.

A case study of 10 fourth- and fifth-grade hearing impaired students in a summer school program revealed that the children consistently engaged in comfortable and pleasurable social interactions among themselves (Crutchfield, 1988). Two contextual factors were important in these

social interactions: There were no substantial communication difficulties because all the children possessed fluent manual communication skills; and because the condition of hearing impairment was taken for granted, a sense of community and inclusion underpinned the interactions.

In a study designed to test the effectiveness of using sociometric ratings with hearing impaired children, Hagborg (1987) utilized a verbally simplified version of the How I Feel Toward Others (HIFTO). The subjects in this study included 20 elementary, 36 middle grade, and 144 secondary hearing impaired students in a residential school. Additional information was collected about the students' IQ, academic achievement, length of enrollment, social skills, and behavioral characteristics, and about their parents' occupations and levels of educational attainment. After the HIFTO was administered to all subjects, 58 students at the sociometric extremes ("accepted" and "rejected") were identified; characteristics of both groups were examined. Accepted students had been enrolled in the school longer and were judged to be better behaviorally adjusted; more females than males appeared in this group. There were no significant differences associated with student IQ, placement status, parental characteristics, oral communication skills, or academic achievement. In general, the correlates of sociometric ratings for hearing impaired students were found to be consistent with those of hearing students.

Taken together, these studies suggest that hearing impaired children may exhibit some differences from their hearing peers in their development of social skills, and that social interactions among hearing impaired children themselves may be conducted without difficulty. The studies also indicate that there is a need for additional research to investigate the nature of social interactions among hearing impaired students.

#### Hearing Impaired Students in Public Schools

As the trend away from residential placement for hearing impaired students became apparent, interest increased in studying the effects of public school educational settings. This research has been concentrated in three areas: teacher and administrator attitudes and beliefs, academic performance, and socialization.

#### Attitudes and Beliefs of Teachers and Administrators

Teachers' knowledge of hearing disorders and their attitudes toward mainstreamed hard of hearing students were examined in a study by Martin, Bernstein, Daly, and Cody (1988). These researchers administered an 84-item questionnaire to 184 regular and special education teachers. As a group, teacher attitudes toward teaching hard of hearing students was slightly positive (a mean of 3.54 on a 5-point Likert-type scale). Neither teacher experience in working with hard of hearing students nor the amount of special education background was found to be related to

teacher attitudes. In this sample, the level of knowledge about hearing disorders was low: On the hearing disorders subsection of the questionnaire, the group answered 57.4% of the 17 items correctly. A majority of these teachers indicated an interest in helping hard of hearing students; however, most did not have much confidence in their abilities to teach such students. As a group, the respondents indicated that they would teach hard of hearing students only if substantial support personnel and in-service training were available.

Behrens (1979) surveyed 165 principals, resource room teachers, and regular classroom teachers in order to study their perceptions of the mainstreaming of hearing impaired students. Of her findings, these are of particular interest here: All three groups were accepting of mainstreaming; although all personnel reported generally positive attitudes toward mainstreaming, junior high personnel were less accepting of mainstreaming than elementary personnel; principals were more accepting than other respondents; and older respondents were more accepting than younger respondents. These findings suggest that younger teachers who work with older (junior-high age) hearing impaired students may be less accepting than others.

Green (1981) utilized a 133-item questionnaire to examine teacher attitudes toward mainstreamed hearing



impaired students. His sample was composed of 77 regular education teachers who taught at levels from kindergarten through eighth grade. Findings suggested that positive attitudes toward mainstreamed hearing impaired students were related to a combination of factors including teacher initiative; level of professional training of the teacher; administrative support of the teacher; resource specialist support of the hearing impaired students; and the hearing impaired child's personal, social, cognitive, and communicative skills.

These studies indicate that both regular and special education teachers hold a variety of attitudes toward and beliefs about hearing impaired students. As Loeb and Sari-giani (1986) found, hearing impaired students perceived and responded to teacher attitudes toward them. Awareness of teacher attitudes and their possible influence on students may be especially important for the researcher who is studying the social interactions of a group of hearing impaired students. The teacher attitudes perceived by the students may appear as prominent elements in the students' attitudes toward and beliefs about school, and teacher attitudes that students do not detect or acknowledge might also have some influence upon the social processes of the student group.

Academic Performance

Pflaster (1976) surveyed 182 hearing impaired students in regular schools and their teachers, parents, and administrators, in order to determine variables significant for successful integration and academic performance. The mean age of subjects was 13.0 years, 43% had severe to profound hearing losses, and there were no other hearing impaired persons in the subjects' families. Factors related to students' successful academic achievement and integration included linguistic competence; speech, lipreading, and auditory abilities; personality; parental acceptance and expectations; parental and professional attitudes; and student self-confidence. Additional findings were also revealing. Parents expected their children to have hearing friends, spouses, and children; to acquire intelligible or normal speech; to graduate from college; and to enter professional or skilled occupations. Parents' perceptions of their children's abilities and potential were generally higher than teachers' perceptions. Students had strong self-concepts, but were judged to be less mature than their hearing peers.

Kindred (1980) presented a similar set of factors in her description of a public school hearing impaired program. Characteristics of successfully mainstreamed teenagers included self-motivation, high academic ability, and relatively high reading ability; good study habits;

adequate maturity and social skills; independence; and lip-reading skills. Parents of successfully integrated students were described as being supportive, holding appropriate expectations, and refraining from being over-protective.

Reich, Hambleton, and Houldin (1977) examined achievement, demographics, and social factors of 195 mainstreamed and nonmainstreamed hearing impaired students in elementary and secondary schools. Most of the subjects were hard of hearing, and none had additional handicapping conditions. Hearing level, intelligence, achievement, self-concept, speech intelligibility, and social adjustment were measured, and results were analyzed by means of stepwise multiple regression analyses. Results indicated that mainstreamed students performed better academically than nonmainstreamed students, but that the incidence of personal and social problems was slightly higher for mainstreamed students. The authors proposed these criteria for successful mainstreaming: Students should have highly developed speech skills, at least average intelligence, and supportive parents. Also, students with greater degrees of hearing loss would need more intensive support services.

Casey (1981) conducted a descriptive study of the achievement and demographics of 72 mainstreamed hearing impaired students aged from 6 to 20 years. Among her findings were that (a) approximately 38% of the subjects had

severe to profound hearing losses; (b) most subjects used speech, and approximately 25% used sign; (c) 92% of the students received such special services as resource-room placement or part-time placement in special education classes; (d) intellectual functioning was normally distributed across the sample; (e) students' reading comprehension was significantly below grade level, and reading achievement was negatively correlated with severity of hearing loss; (f) math achievement was low, but generally higher than reading achievement; and (g) teachers gave students high ratings for unreflectiveness, inattention, and blaming, and for originality and rapport with teacher.

Allen and Osborn (1984) conducted an extensive descriptive study of the achievement and demographics of 1,465 mainstreamed and nonmainstreamed hearing impaired students aged from 8 to 18 years. Demographic factors included in the study were age, sex, ethnicity, degree of hearing loss, age of onset of hearing loss, and additional handicapping conditions. Achievement in reading comprehension, mathematics concepts, and mathematics computation was measured with the SAT-HI. The analysis of covariance and multiple classification analysis were used to analyze data. Among the researchers' findings were that mainstreamed hearing impaired students performed better than nonmainstreamed students; mainstreamed students were less impaired than nonmainstreamed students; and other factors,

including ethnicity and additional handicapping conditions, were stronger predictors of achievement than mainstreaming.

Kluwin and Moores (1989) investigated factors influencing hearing impaired adolescents' achievement in mathematics. The researchers utilized questionnaires administered to students, parents, and teachers; teacher logs; and structured observations. Data were analyzed by means of multiple regressions. The prime determinant of achievement was found to be the quality of instruction, regardless of type of placement (mainstreamed or special class). Student background factors were found to be a primary determinant of achievement. Mainstreaming with an interpreter did not have any specific effect on the mathematics achievement of students.

In these studies, researchers identified several factors related to the successful mainstreaming of hearing impaired students and revealed a number of differences between hearing impaired students who are mainstreamed and those who are not. Such issues may prove valuable to the researcher who is studying a group of hearing impaired students in a public school setting. Questions remain about how hearing impaired students themselves perceive and interpret differences in placement and performance. This issue had some importance in the present study.

### Socialization

A considerable number of studies of the social interactions of hearing impaired students in mainstream settings have been conducted, especially during the past two decades. Researchers have used a variety of methods, including self-report instruments (sociograms and Likert-type scales), structured observations, participant observations and interviews, and experimental studies. Virtually all of these studies have been focused on social settings in which hearing impaired students and hearing students are both present and have opportunities to interact.

In an early and often-cited study, Elser (1959) used sociometric instruments to measure levels of acceptance of 9- to 12-year-old hearing impaired students in regular education classes. He found that hearing impaired students overall were not as well accepted as their normally hearing classmates.

Miller, Munson, Gargantiel, and Huang (1978) utilized a 36-item Likert-type scale to measure student and faculty attitudes toward deaf students mainstreamed into secondary-level occupational education classes. Results indicated that attitudes toward the deaf students were generally more favorable than unfavorable, but that some negative attitudes did exist. Deaf students were perceived as emotionally volatile, defensive, overly dependent, and insecure. One-third of the hearing students expressed reluctance

toward socializing with deaf students and considered the presence of a deaf student in a group to be an inconvenience. Among the faculty, 50% expressed mild agreement, and 25% expressed strong agreement with the statement that the presence of deaf students in class is a hardship on the instructor. Deaf students were considered to be intellectually inferior by 35% of the students and 25% of the faculty.

Glaser (1979) employed four procedures to measure attitudes of and toward hearing impaired students in grades one through six. His findings indicated that teachers who had hearing impaired students mainstreamed into their classes had significantly more positive attitudes toward hearing impaired students than did teachers without hearing impaired students in their classes, that hearing students in integrated groups had more positive attitudes toward hearing impaired students than did hearing students in non-integrated groups, and that hearing impaired students overall received significantly lower peer popularity scores than did normally hearing students.

Blood and Blood (1983) investigated the attitudes of 120 fifth-, sixth-, and seventh-grade hearing students toward three classifications of children: normal, deaf, and hearing impaired. None of the subjects attended classes in which hearing impaired students were mainstreamed, but 45 reported that they knew a deaf or hearing

impaired child. The subjects responded to three questionnaires in which they selected 15 out of 48 adjectives to describe normal, hearing impaired, and deaf children. Analysis of scores indicated that the mean was significantly more positive for normal children than for either hearing impaired or deaf children; there was no significant difference between subjects who reported knowing hearing impaired or deaf children and those who did not.

Fleischer (1984) investigated procedures designed to foster the acceptance of hearing impaired students by eighth- and ninth-grade hearing students. Experimental groups received contact experiences (the presence of a resource-room program for hearing impaired students) or cognitive experiences (a materials package designed to improve attitudes toward hearing impaired students), or both. Results indicated that both contact and cognitive experiences were helpful in improving attitudes toward hearing impaired students, that girls seemed to be more accepting than boys, and that there were no significant differences between eighth-grade and ninth-grade students.

Carey (1986) investigated the social-emotional adjustment of 30 hearing impaired fourth through sixth graders; 15 were mainstreamed and 15 were in segregated classes. Data were obtained from four instruments that utilized either student or teacher ratings. Results revealed that mainstreamed students perceived themselves as more



competent in global self-worth and physical and cognitive competence, and they generally utilized more mature problem-solving skills than the segregated students. Mainstreamed students perceived themselves as less socially competent, however, and were significantly more internal than segregated children.

McCauley, Bruininks, and Kennedy (1976) utilized a structured observation method to investigate the social behaviors of 14 hearing impaired and 14 nonhandicapped elementary students. Students were observed in continuous 30-second intervals for two half-hour observation sessions; nine behavioral categories were utilized. Results revealed no significant differences in the behaviors of hearing impaired and hearing students in the number of positive and negative interactions or in the use of verbal and nonverbal acts. However, hearing impaired students tended to interact more often with their teachers, whereas hearing students interacted more frequently with peers.

Antia (1982) utilized a structured observation procedure to investigate the social interactions of partially mainstreamed hearing impaired students. Her sample was composed of 32 hearing impaired and 84 hearing children in grades one through six. Each student was observed in fixed intervals (10 seconds every 3 minutes) for four half-hour observations. Hearing impaired students were observed in mainstreamed and self-contained classes. Behaviors were

recorded in four categories: physical placement, interaction, mode of communication, and unusual positive or negative behaviors. Significant differences were found in the categories of interactions and mode of communication. In regular classes, hearing impaired students interacted more often with teachers than did hearing students; and in special classes, hearing impaired students increased the number of interactions with teachers. The frequency of interactions between hearing impaired students and peers remained the same in both settings. The author offered two possible explanations for this difference: Either the class environment of the special classes may have discouraged student interactions, or the students may have lacked certain conversational skills. In integrated classes, hearing impaired students used more nonverbal and less oral (speech) communication than hearing students; in special classes, hearing impaired students increased their use of speech and decreased their use of nonverbal communication acts.

Ladd, Munson, and Miller (1984) utilized three research procedures in a longitudinal study of the communicative behaviors of hearing impaired high school students and the attitudes of hearing high school students toward their hearing impaired classmates. Results of an observational procedure revealed that the frequency of interaction between hearing impaired and hearing students increased

significantly over time; the number of interactions initiated by hearing impaired students decreased significantly, however. Results from a peer-rating study showed that hearing students' ratings of hearing impaired students in the dimension of considerateness increased significantly over time. No significant differences were found in ratings of disruptive-attention-seeking, motivation-maturity, or social ability. During interviews, a majority of parents reported improved peer relations, attitudinal changes, and greater interest in schoolwork in their hearing impaired children. A majority of the instructors reported awareness of friendships between hearing impaired and hearing students. A large majority of the hearing impaired students reported having hearing friends; a large majority of the hearing students reported having hearing impaired friends. The authors concluded that the mainstream program proved to be an effective social environment for mainstreamed hearing impaired students, as evidenced by the improvement in attitudes and frequency of social interactions over time.

Saur et al. (1986) utilized participant observation and interviews in a study of classroom experiences as they were perceived by eight hearing impaired college students. Three salient patterns emerged from data analysis: participation, relationships, and feelings. The researchers concluded that class participation for hearing impaired

students was inhibited temporally by the time lag of signed interpretation, and spatially by students' seating near the interpreter. Relationships between hearing impaired and hearing students depended on students becoming comfortable in each others' presence, and on sharing experiences in the social context of the classroom. Students' feelings about mainstreaming were positive when they felt they could participate fully in the class and when their needs for support services could be met without setting them apart from their classmates.

Libbey and Pronovost (1980) presented an extensive description of communication practice and attitudes reported by hearing impaired students in public schools. The researchers compiled data from questionnaires completed by 557 mainstreamed hearing impaired students 11-21 years of age; students in 32 programs in 18 states participated in the survey. The authors cautioned that the data were based on self-reports, and are therefore subject to varied interpretations; still, the general descriptive results are informative. Nearly half (48.5%) of the students reported that they spent time with both hearing impaired and hearing students; 35.8% spent most or all their time with hearing students; and 13.6% interacted most often with other hearing impaired students. Students used manual communication most often when communicating with their hearing impaired friends. In conversations with hearing people, they used

spoken language most often; they also used interpreters and writing to a lesser extent. The students reported using a number of strategies to clarify misunderstandings in conversations with hearing people. A majority of respondents (79.5%) believed that hearing people wanted to converse with hearing impaired people, 56.5% thought hearing people had strange ideas about hearing impairment, and 45.6% believed that hearing people got upset when they didn't understand hearing impaired people. Of the difficulties students experienced in school, the most frequently reported were following a class discussion (38.2%), completing schoolwork (34.5%), making friends (25.5%), and being embarrassed about their speech (23.2%). In general, the students reported that they felt reasonably successful in using spoken communication with hearing people, in part because they had learned to switch communication modes and to employ other strategies in order to interact effectively.

Raimondo and Maxwell (1987) examined the communicative acts of 20 hearing impaired junior high and high school students through a combination of qualitative and quantitative research procedures. The subjects were observed for a total of 4 hours each as they participated in mainstream classes. Findings revealed that these students used speech most often when they communicated with teachers and hearing

classmates, and speech, gesture, and sign in interactions with hearing impaired classmates. These data matched results of a previous study in which similar subjects responded to a questionnaire focused on communication modes. Combined results of the two studies indicated that speech was the most commonly used communicative mode among these hearing impaired students in their mainstream classes. The observational study revealed additional information that the researchers found disturbing. When a student was the only hearing impaired person in the classroom, 5 of the 20 avoided communicating with teachers and hearing classmates altogether, and 7 others were reticent, engaging only in brief, impersonal exchanges with hearing classmates and teachers. When two or more hearing impaired students were in the same class, they tended to sit together and interact with each other more often, more freely, and with greater comfort than they did with their hearing classmates. Referring to the latter findings, the authors stated:

More than half of the hearing impaired students appeared to be loners in their own classrooms ....for these 20 junior and senior high school hearing-impaired students, interaction with normal hearing students was rare and neither social nor voluntary. (Raimondo & Maxwell, 1987, p.271)

Mertens (1989) surveyed hearing impaired college students to investigate the quality of their social experiences in high school. The sample included students who had

attended residential schools and students who had experienced a variety of mainstream settings. The author acknowledged two important limitations of the study, the small size of the sample (49 students) and the fact that the study involved college juniors and seniors reporting on reflections of high school experiences. Although generalization of the results might be limited, the findings offer revealing insights into issues of the socialization of hearing impaired adolescents in school. Three findings were most relevant to the present study. First, mainstreamed students who reported positive social experiences had attended school with other hearing impaired students; those reporting negative experiences were the only hearing impaired students in their school or grade level. Second, although only 4 of the 22 residential students reported having hearing friends, all mainstreamed students reported having friendships with hearing students. However, the depth of those friendships varied according to the hearing impaired students' level of communication skill and the hearing students' willingness to assist in overcoming communication difficulties. Third, residential and mainstreamed students who had supportive educational environments (interpreters, understanding teachers, and hearing classmates who facilitated communication) reported having positive attitudes toward their teachers. Mainstreamed

students without a supportive environment reported negative attitudes toward teachers.

Foster (1989) conducted in-depth open-ended interviews with 25 hearing impaired adults concerning their experiences in school. Hearing impaired informants who had attended regular public schools were generally approving of the quality of their academic achievement and generally negative about the quality of their social experiences. Exceptions to the latter finding were expressed by informants who had attended school with other hearing impaired students: "In these cases, the deaf students offered each other support and the pleasure of easy communication." (Foster, 1989, p. 46) The informants reported a range of difficulties they experienced in their interactions with hearing classmates: In addition to obstacles to easy communication, informants also frequently reported that their social relationships with hearing students had been superficial.

Collectively, these studies provide a number of revealing characteristics of the social interactions of hearing impaired students in the public school context. Hearing impaired students experience lower levels of acceptance by hearing students; however, increased contact between hearing and hearing impaired students over time leads to increased levels of acceptance and interaction. Hearing impaired students use a variety of communication



modes, preferring speech when communicating with hearing students, and manual communication in conversations with hearing impaired peers. Hearing impaired students tend to prefer interactions with teachers and other hearing impaired students over interactions with hearing students. Hearing impaired students in mainstreamed settings may be less socially adroit than those in segregated classes. Finally, hearing impaired students who have opportunities to interact with other hearing impaired students express greater satisfaction about their social experiences. Although Antia (1982) and Carey (1986) included direct examination of the interactions among hearing impaired students in segregated settings, none of the studies had this social context as its primary focus. The findings that hearing impaired students communicated more readily and comfortably with each other, and that they did so in a different communication mode, indicate that there is a need for more intensive study of the nature and purposes of the social interactions of hearing impaired students among themselves.

#### Hearing Impaired Students in Middle Schools

It is clear that the integration of exceptional students is a current priority among leaders in middle school education. Recognizing that exceptional students are "particularly vulnerable and self-conscious young adolescents need(ing) inclusion and involvement in all facets of school

life" ("National Middle School Association," 1989, p. 20), the National Middle School Association recently resolved that serving exceptional students would be one of its 10 educational priorities.

A number of researchers have addressed organizational, programming, and instructional issues relating to the education of exceptional early adolescents in middle schools. Wiener (1978) identified two extremes in mainstreaming exceptional students: one procedure randomly assigned exceptional students to classes, leaving them to succeed or fail on their own; and the other segregated exceptional students into a special wing, keeping them apart from other students in all school activities except physical education and lunch. The author recommended a comprehensive plan through which exceptional children would be mainstreamed effectively with appropriate attention given to their academic, social, and individual needs. Morrill (1979) described an organizational procedure that she contended was highly conducive to effective mainstreaming. The essential features of the plan were team organization, heterogeneous grouping of students, and the placement of a resource teacher in each team. Kerble (1988) also recommended the inclusion of special education teachers in interdisciplinary teams. In this structure, special education teachers would be able to monitor their students' progress more efficiently and also develop a sense of

collegiality with regular education teachers. Doda (1980) recommended the interdisciplinary team approach as supportive for the personal and social development of mainstreamed students. In addition, she advocated providing exceptional students with a special school advisor and home base, but recommended against placing all exceptional children on a single team or in just a few advisors' classrooms. She found peer support and extra teacher attention to be beneficial, as well.

Acknowledging negative attitudes toward mainstreaming held by many regular education teachers, Archibald (1981) recommended that middle schools utilize inservice training to prepare teachers for mainstreaming. He also proposed the use of a selection procedure that included regular and special education teachers in committees to determine the readiness and placement of exceptional students in regular classes.

In discussing the purposes of middle schools to meet students' academic, personal, physical, and social needs, McEwin and Thomason (1982) stated that early adolescence was a difficult time for students without handicaps, and a crucial time for exceptional students. When differences between students can be devastating, potential exists for stress and uncertainty. To meet the needs of exceptional students, these authors recommended that middle schools provide diversity in instructional strategies,

individualized instruction, support for concrete operational abilities, and opportunities to develop personal and social skills. Citing research that revealed that non-handicapped students often held negative attitudes toward handicapped students, Manning (1982) advocated using children's literature as one means of improving students attitudes. The author presented a sample list of instructional activities, criteria for selecting appropriate reading materials, and an annotated list of children's books about children with handicaps.

Results of two research projects focused on mainstreaming have also been reported. Brady, Swank, Taylor, and Freiberg (1988) tested a training procedure designed to improve the effectiveness of regular education teachers who taught mainstreamed students. Results showed that immediately after intervention, teachers in the experimental group demonstrated a significant increase in the use of academic questioning and academic reinforcement. Results of follow-up measures indicated that these effects were maintained over time, and that students in experimental groups later increased their use of academic materials. The researchers concluded that the effectiveness training procedure produced important changes in teacher and student behavior. Truesdell (1988) conducted a qualitative study of the effects on mainstreaming produced by the culture and organizational structure of an urban middle school. She

found that there were academic, behavioral, and bureaucratic factors that limited handicapped students' access to mainstreaming. Among the academic factors were homogeneous grouping of students, an ineffective system for selecting students for mainstreaming, and poor communication between regular and special education teachers. The value placed on orderliness by the administration and faculty restricted mainstreaming to students who were well behaved, thus foreclosing mainstreaming to emotionally handicapped students. Three bureaucratic factors appeared to inhibit mainstreaming. First, large classes and the administrative practice of asking teacher permission before adding handicapped students to classes limited the number of classes into which students could be mainstreamed. Second, a number of factors led to handicapped students' being mainstreamed after the beginning of the school year. Third, perceptions of handicapped students as an outside group limited their access to practical arts and music classes and to some of the school facilities. The author concluded that the culture and organizational structure of the school exerted a powerful negative influence on the mainstreaming of handicapped students.

Two articles contained specific information about mainstreaming hearing impaired students into middle schools. Ironically, the earlier of these predates the enactment of PL 94-142 by five years. Fahrney (1972)

discussed the characteristics and needs of hearing impaired students and recommended criteria for integrating them into regular classes. Hearing impaired students were characterized as having normal intelligence, low test scores, some difficulty in conceptualizing information, mild to severe language and reading problems, delayed vocabulary development, but no differences in physical ability. They also exhibited delays in moving from dependence on parents, and some abandonment by peers. The author remarked that the deaf child "has to cope with the doubly persisting overlapping situations of transitional status as a child-adult and being deaf" (Fahrney, p. 24). The hard of hearing child "may find adjustment problems more difficult than does the deaf child since he is caught more in the overlapping world of the hearing" (Fahrney, 1972, p. 24). Deaf children as a group were the only exceptional child group specifically excluded from the recommendations for integration:

It was the opinion of this committee that the child who was operating at the "deaf" level, irrespective of audiogram readings, would not function well in an open middle school complex. This was believed because these children are usually 2 1/2 or more years delayed in language development. Therefore they need a more limited environment wherein concentration on this problem is possible. (Fahrney, 1972, p. 71)

Brady, Dickson, and Dickson (1983) pilot tested an interactive computer game with pairs of hearing and hearing impaired middle and high school students. The game

required one member of the pair to describe a specific figure presented in a set of similar figures on the screen. The second student was to determine which figure was described either by selecting it or by asking for additional information. Hearing and hearing impaired students assumed both roles in a 45-minute game session. The authors determined that the game had academic and social benefits for all but one pair of the 20 subjects. They stated further that such an activity would provide social benefits to similar hearing impaired students who otherwise had few opportunities for sustained communication with hearing peers.

Researchers and practitioners have treated a number of issues relating to the implementation of PL 94-142 in the middle school. Most of these pieces provide general information to assist middle school educators in serving exceptional students. However, little attention has been devoted specifically to the education of hearing impaired students in middle school settings.

#### Constructivist Theory in Related Research

Berger and Luckman's (1967) theory of the social construction of reality has been extended to a variety of studies of adolescence and into research in educational contexts. Because the substance of the findings cited below is not central to the present study, it will not be elaborated fully. Rather, the works are presented to

demonstrate the applicability of the theory to research in school settings and its suitability for formulating explanations of early adolescents' social behavior.

Berger and Luckman's (1967) theory has been applied widely in studies of adolescents. Lindsey (1975) included Berger and Luckman's (1967) discussion of therapy (one means of maintaining the accepted social reality) in his recommendations for educating adolescent mental patients so that they could "understand the social forces involved in the social construction of a mental patient career" (Lindsey, 1975. p. 226) and engage in activity that would lead away from confinement in a mental hospital. Baker (1982) included the theory among several she used to develop the proposition that adolescents are engaged in practical theorizing as they make sense out of their selves, their social contexts, and the world. Later, she utilized the theory in an extension of her research with adolescents, proposing that the research interview itself is a social encounter in which adolescent informants have access to adult definitions of reality and make use of them in formulating and ordering their responses (Baker, 1983). Berger and Luckman's (1967) theory is central to the argument that adolescents incorporate televised images into their apprehension of social reality by mediating the images through the objectivated approval or disapproval of peers (Peterson & Peters, 1983).



Berger and Luckman's (1967) theory has also been applied in a variety of educational studies. In his examination of social class distinctions that were maintained in a kindergarten class, Rist (1972) utilized as one of his arguments Berger and Luckman's (1967) proposition that language is central to human socialization. Taylor (1980) utilized Berger and Luckman's (1967) work as her primary theoretical basis in examining the relationships between student perspectives and schooling in an Australian secondary school. She found that once students had selected an instructional track, social processes among the students operated to maintain group identity and to justify and reinforce the choices students made about the courses they were taking and the careers to which these courses would lead. Simpson (1981) and Rosenholtz and Simpson (1984) relied extensively on Berger and Luckman's (1967) theory in developing their propositions about students' perceptions of ability. These authors argued that through observations and informal conversations, students in traditionally structured classrooms could participate in formulating the notion that intellectual ability is stable, widely dispersed across individuals, and capable of predicting success in a range of nonacademic activities. Freebody and Baker (1985) incorporated Berger and Luckman's (1967) theory into their interpretation of children's induction into literacy: Reading itself is a socially sanctioned

skill, and children's reading materials transmit salient features of adult reality to young readers. In framing her examination of the cultural differences between deaf parents of deaf students and the students' hearing teachers, Erting (1985) included an investigation of the perspectives of hearing parents of deaf children. In interpreting the hearing parents' views, the author incorporated Berger and Luckman's (1967) proposition that language is the essential instrument of socialization. In their ethnographic study of the culture of deaf adults, Nash and Nash (1981) utilized Berger and Luckman's (1967) propositions about resocialization to characterize the obstacles deaf adults encounter when they attempt to participate fully in the society of hearing people. Evans and Falk (1986) relied extensively on Berger and Luckman's (1967) theory in framing their ethnographic study of a residential school for the deaf. These researchers applied the constructivist theory generally throughout their work, and made frequent use of the proposition that language is the principal instrument of socialization.

It is clear that Berger and Luckman's (1967) work can be applied effectively as a theoretical basis for examining and explaining social phenomena located in a middle school context. Early adolescents are quite capable of participating in the construction of the partial reality of school through their physical activity and conversations.

Summary

Early adolescents constitute a distinct stratum of the school population, with prominent characteristics and developmental needs in cognitive, physical, psychological, and social dimensions. For approximately 2 1/2 decades, middle school educators have been developing and refining practices to support early adolescents not only in their academic achievement, but also in their ongoing physical, psychological, and social maturation. Early adolescents who are hearing impaired experience certain academic, psychological, and social developmental challenges in addition to those experienced by nonhandicapped early adolescents. During the past 2 decades, the implementation of PL 94-142 has resulted in increasing numbers of hearing impaired students being placed in regular public schools. This educational context has generally fostered comparative success in academic achievement, but questions remain concerning the social development of hearing impaired students in public schools. Little information is available about the socialization of hearing impaired early adolescents among themselves; likewise, little is known about the educational experience of hearing impaired students in middle schools. The purposes of the present study were to describe and explain the social processes and cultural themes within a group of hearing impaired early adolescents and to examine the meaning that a middle school context had

for these students. This constructivist approach is consistent with Berger and Luckman's (1967) theory of the social construction of reality. This theory has been extended into a number of other educational contexts; it was valuable in the present study as a means of assisting in the organization and explanation of the data.

## CHAPTER III METHODOLOGY

### The Research Perspective

The purposes of this study were to describe and explain the social processes and cultural themes within a group of hearing impaired early adolescents and to examine the meaning that a middle school context had for these students. There is presently available an abundance of literature on the general education of hearing impaired students. Since the implementation of PL 94-142, a considerable amount of research has been conducted to describe the socialization of hearing impaired students in public school settings. Virtually all of this research has been focused on the social interactions between hearing impaired students and their hearing peers. The review of the literature indicated that research on the social interactions among hearing impaired students themselves was practically nonexistent, and there were no substantial studies that specifically addressed the social interactions within a group of hearing impaired students in the middle school context.

Qualitative methods are recognized as particularly valuable for studying areas in which little research has been undertaken previously (Lutz & Ramsey, 1974). Becker

(1958) discusses the suitability of qualitative research when the interest of the researcher is in studying a social organization rather than seeking to explain relationships among discrete, abstract variables. When the intent of the researcher is to conduct a broad and deep examination of a distinct social context, ethnographic procedures are particularly valuable (Vidich, 1955; Wilson, 1977; Wolcott, 1975). An assumption fundamental to ethnographic research is that individuals in social groups engage in complex behaviors and possess knowledge about how to interpret those behaviors (Magoon, 1977). Ethnographic methods allow the researcher to explore patterns of nonverbal behavior and the development of social relationships over time (Metz, 1983); and meanings and perspectives that are tacit, as well as those that are explicit, become accessible (Spradley, 1979, 1980). When the focus of an ethnographic study is a distinct group of individuals and when the study involves the collection and analysis of an extensive amount of linguistic data in order to explain the social phenomena, ethnographic methods in the tradition of cultural anthropology are best suited to the researcher's needs (Jacob, 1987). After considering the nature of the research question, this researcher concluded that ethnographic methods in this tradition were most appropriate for this study.

Entry

Late in the fall of the year preceding the study, the researcher began investigating a number of sites that might meet the needs of this project. By the following January, he had narrowed the field of possible sites to two. In discussing his proposed study with Elizabeth Brooks, a teacher at Edison Middle School, he determined that the Edison site offered the most promise for the study. (All proper names have been changed in this paper to protect the identity of informants.) First, Mrs. Brooks, an experienced teacher of the hearing impaired, taught a class of hearing impaired sixth, seventh, and eighth graders who were partially mainstreamed into regular classes. Second, the researcher recognized Edison as having a fine reputation for putting recommended middle school principles into practice. Third, Mrs. Brooks indicated an interest in the proposed study and a willingness to participate. Even though the city of Charlesberg is located some 75 miles from the researcher's home, he decided to pursue it as his first choice for the study site.

The following spring, the researcher secured permission from the necessary personnel at the Charlesberg Board of Education. He then met again with Mrs. Brooks to describe the study to her in more detail and to confirm that she was still willing to participate. The researcher then obtained permission from the principal at Edison and

began making initial preparations for beginning the field-work. The researcher remains grateful for the interest in the study and the cooperation and support he received during this entire preparatory phase.

The study began on the students' first day of school. At an opportune moment, Mrs. Brooks introduced the researcher to the students and he described the study and its purposes to them. He then asked if they had any questions about the study. There were none, possibly because of the excitement they felt on the first day of school. During subsequent visits, students asked questions occasionally, and the researcher responded to them openly.

In keeping with ethical practice in qualitative research and with the requirements of the University of Florida Institutional Review Board, the researcher obtained the informed consent of parents before interviewing students. Before the interview phase of the study, the researcher explained the purpose and process of the interviews to the students and answered their questions. He then explained the purpose of parental consent, and asked that students who were willing to be interviewed sign two copies of the informed consent form. All the students were willing to participate and signed the form. The researcher then mailed letters and the consent forms with return envelopes to all the students' parents. Within 2 weeks, four sets of parents had responded, and the researcher sent



a second letter and forms to the remaining parents. Five additional forms were returned after this mailing. The researcher then telephoned one set of parents, explained the study to them, and secured their written permission later that week. Parents of the 11th student had no telephone, so the researcher sent them a third letter. Shortly after that mailing, the student informed the researcher that her parents did not wish for her to be interviewed. The interview phase of the study was conducted with 10 of the 11 students.

### The Setting

Four specific features of the setting indicate its appropriateness for the purposes of this study:

1. The informants consisted of a group of 11 hearing impaired early adolescents attending a public middle school, their teacher, her aide, and the students' interpreter. At the beginning of the school year, 8 students were enrolled in the special class for the hearing impaired. Two were eighth graders, 2 were seventh graders, and 4 were in the sixth grade. During the year, 3 new sixth graders entered the group.

2. The students had regular opportunities to spend time together in direct interaction. They attended special and mainstream classes together daily, and engaged in a wide variety of social exchanges.

3. It has been firmly established that the school selected for the study adheres to recommended middle school practice.

4. The researcher was able to observe the students in their routine activities and to interview students without distraction and without disrupting their schoolwork unnecessarily.

### Research Methods and Procedures

#### Collection of Data

Conducting ethnographic research entails the utilization of a number of mechanical procedures and ethical safeguards. In collecting data, the researcher acts as the primary instrument (Metz, 1983; Wilson, 1977). A variety of conventional procedures may be employed; among these, participant observation and interviewing are the mainstays, and the use of unobtrusive measures may also be valuable. (Wolcott, 1975).

#### Participant observation

The term participant observation implies any of a variety of roles that the researcher may assume in the setting under study. In this study, the researcher began as a passive participant observer (Spradley, 1980). That is, the researcher acted primarily as a spectator, locating himself so that he was outside the main areas of activity, but close enough to them so that events were visible and audible. As the study progressed, the level of the

researcher's participation in the social interactions gradually increased. Informal conversations with adult members of the group began on the first day of fieldwork and continued throughout the study. Brief exchanges with student members occurred early in the study, and by the time the interview phase was initiated, the researcher was engaging regularly in short, casual conversations with student informants.

The researcher observed actions, informal conversations, and formal academic discourse and recorded data in the form of handwritten field notes. In order to ensure that this observational record was as complete as possible, the field notes were expanded during the observation period, as time allowed, and also immediately afterward. Protocols, fully expanded accounts of the observation, were typed as soon as possible after each observation, in accordance with recommended practice (Bogdan & Biklen, 1982; Lofland & Lofland, 1984). All observation protocols were prepared within 24 hours of leaving the field, and with four exceptions, these were done on the same afternoon or evening of the observation day.

In conducting previous qualitative studies of hearing impaired students, the researcher found it valuable to record the form of the conversation as well as the content. To this end, the researcher utilized a coding system to indicate whether messages were conveyed in speech, sign, or

both. Because this procedure required a considerable amount of concentration, it was used judiciously so as to provide as much information about the communication form as possible while still allowing the researcher to observe without experiencing fatigue. These data proved to be quite informative in the present study. Findings about the informants' communication modes are discussed extensively in Chapter IV, and the potential value of the procedure for future research is discussed in Chapter V.

In addition to the mechanics of participant observation, the researcher must be aware of his influence on the setting. By entering a social scene, even as spectator, the researcher becomes a part of the context. Vidich (1955) points out that as informants come to realize the regularity of the researcher's entry into the scene, they attempt to place him or her in an understandable role. Becker (1958) emphasizes the need to monitor the informants' perspectives of the researcher. This researcher was conscientious in recording and analyzing what informants said about his presence and activity.

Because of his age and size, the researcher realized that he would not be able to pass as a student. Instead, he endeavored to maintain the role of a friendly and interested adult. He avoided any action or statement that might have given students the impression that he was associated with the lines of authority at Edison. This

strategy apparently succeeded. After showing some initial interest in the researcher, the students gradually began taking his presence for granted.

An essential feature of participant observation is earning the informants' trust (Everhart, 1975; Wilson, 1977). To this end, the researcher attempted to maintain a consistent role as he participated in the scene. When informants asked questions about his activity, he answered them openly and honestly. He explained his practice of coding informants' names in his field notes, and showed his notes to the informants so they could verify this. Occasionally, the researcher observed informants performing actions that constituted infractions of minor rules. At times, an informant saw that the researcher was observing and jotting notes, and asked whether the questionable action was being described. The researcher always answered these questions in the affirmative, adding that the information was for his use only. The researcher did not disclose this information to anyone else, and the informants gradually realized that the researcher did not pose a threat. After several weeks, the misbehaviors continued but the questions did not.

Because the focus of this study was on the social interactions among the hearing impaired students themselves, the majority of the observations were conducted in settings where students were interacting apart from their

hearing schoolmates. The researcher observed most frequently in Mrs. Brooks' classroom. He also observed students in their special speech classes in a nearby room. Twice he rode to and from Edison with four students who lived in Welachee, a small town some 45 miles from Charlesberg. In order to frame the informants' interactions in these segregated settings, the researcher also observed them in integrated contexts. These included the school cafeteria, their mainstream classes, free time periods on Fridays, and free time before school.

The researcher visited the scene to conduct observations a total of 45 times during the school year. His original intention to observe at least once in each week was carried out with three exceptions necessary because of personal and professional conflicts. Most of the visits were made on Mondays, Wednesdays, and Fridays in order to avoid conflict with the researcher's professional schedule. The first and last visits were made on the first and last days of school, because these days promised to provide opportunities to observe heightened social activity. Similarly, the researcher observed on the days immediately before and after the two major school holidays.

The observation schedule was alternated across the visits so that the researcher could observe typical activities throughout the school day. Data from the composite schedule of observations provided a fuller sense of

what an entire school day was like for the informants. To increase his understanding of the school day, the researcher conducted two visits that covered an entire day each, including the bus ride from Welachee to Charlesberg and back.

These visits constituted a total of 124 hours of fieldwork, including the interviews, which will be discussed in the following section. Field notes yielded 51 observation protocols with a combined length of 520 pages of data.

#### Ethnographic interviewing

Participant observation gave the researcher a valuable perspective of the social scene in this study, and although abundant information about the informants' activities and statements were collected, informants' perspectives and the underlying meanings they had for the events were not observable. Interviewing informants allowed the researcher to gain better access to their perspectives and to collect important personal background information that was not observable.

In this study, the researcher interviewed informants four times each, with two exceptions. One informant participated in only three interviews, and the other, in five. Most interviews were conducted with individual students. Six informants also participated as pairs in five interview sessions. These interviews allowed the researcher to

interact with informants both as individuals and while they were interacting with each other. Interviews were conducted during free-time periods on Fridays in order to avoid disrupting the students' academic work. This schedule allowed the interviews to last from 20 to 25 minutes.

Data from these interviews were collected verbatim through the use of an audiotape recorder. The speech of some informants was unintelligible, and they conversed in sign. In those cases, the researcher made a simultaneous voice interpretation as he conversed with informants. Transcriptions of interviews of both types proved to be accurate and dependable. The researcher also interviewed the adult members formally and informally. Data from these interviews were recorded by hand both during the interviews and after they took place.

The researcher followed recommended procedures to ensure that interviews yielded the optimum amount and quality of data (Bogdan & Biklen, 1982; Lofland & Lofland, 1984). Interviews were conducted in the speech classroom, because it was not otherwise in use on days in which interviews were made. This room provided optimum conditions for the interviews. It was close to Mrs. Brooks' classroom, it was familiar to the informants, and it was comfortable. It was free from distractions, and the researcher and informants were able to converse privately.



During the first interview with each informant, the researcher asked general biographical questions. This assisted in putting the informants at ease with the interviewing process and provided the researcher with valuable biographical data and general personal perceptions. As the interviewing continued, data from previous interviews and observations were used to formulate new questions in order to focus more and more narrowly on the social themes most prominent in the informants' life at Edison.

As the interviewing phase progressed, it became necessary to explore interpersonal relationships among students by asking informants to classify other members of the group according to several criteria. To avoid having informants do this in conversation or on paper, the researcher put the names of all members on wooden tokens the approximate size of half dollars. Informants were then able to form classifications that included all members, and to modify their categories as the researcher probed for more specific explanations of the informants' classification criteria. This procedure turned out to be a particularly valuable one.

Besides these procedural considerations, one other recommended interviewing practice was helpful. Adelson (1983) suggested that early adolescents may not have attained the degree of cognitive organization that adolescents have developed. The researcher was guided by this

suggestion as he formulated questions for interviews. Also, he was prepared to restate questions and use prompts and probes in order to clarify content for the informants. These strategies were used occasionally, especially when more complex questions regarding informants' social self-perceptions were necessary.

In accordance with conventions of ethical practice, at the beginning of each interview, the researcher explained the purpose of the interview. He notified informants of their rights to decline to participate, to decline to answer particular questions, and to withdraw from the study at any time. The researcher also asked each informant if he or she had any questions or comments several times during each interview.

On the whole, informants were quite comfortable during interviews. In the first few moments during initial interviews, some informants gave brief responses and other signals that they felt uneasy, but in all cases, this discomfort diminished rapidly. The researcher evaluated each interview in terms of the quality of informant participation and its consistency with previous interview and observation data. All interviews were judged to be of high quality, and data from them were judged to be dependable. These interviews yielded 40 typed transcriptions with a combined total of 228 pages.

### Unobtrusive measures

Recommended practice for conducting ethnographic research includes using a variety of sources in collecting data (Becker, 1958; Lutz & Ramsey, 1974). In addition to participant observation and interviewing, the use of unobtrusive methods of collecting data can prove to be valuable (Wolcott, 1975). The researcher supplemented data obtained through the two primary sources by collecting documents and taking note of such artifacts as student work, items posted on bulletin boards, and textbooks and other educational materials that were in use. These data proved to be of value in triangulating data obtained from the primary methods.

### Data Analysis

In conducting qualitative research, the process of data collection and analysis is cyclical. That is, the researcher begins analyzing data while still conducting fieldwork. The ongoing analysis assists in refining the research questions and giving direction and focus to subsequent observations and interviews (Becker, 1958; Lutz & Ramsey, 1974; Spradley, 1979, 1980; Wilson, 1977). The researcher used Spradley's (1979, 1980) Developmental Research Sequence, which is a widely used system for ethnographic data collection and analysis when the data are linguistic (Jacob, 1987). This system provided an

organized means of analyzing data both during fieldwork and after all data were collected.

The first step in organizing data from protocols was domain analysis. This procedure involved classifying data according to a set of nine semantic relationships (causality, means-end, and attribution, as examples). Domain analysis allowed for the identification of broad cultural categories and provided an overview of the scene. The process began early in the study and continued throughout the data collection period. Domain analysis yielded a total of 407 domains. A number of these contained few entries and were either discarded or subsumed under classifications in other domains.

After a number of domains of sufficient size were identified, the researcher began to make taxonomic analyses. This process reorganized each domain into subcategories and assisted the researcher in discovering new relationships that further guided the collection of data.

Toward the end of the data collection period, the researcher determined that certain domains held special significance in the cultural scene. Among these domains were the relevant roles and norms, criteria for evaluating communicative competence, and the processes used to induct new members into the group. These domains were examined by means of componential analysis, which further organized them into dimensions of contrast. This organization of

highly specific units of meaning enabled the researcher to focus data collection even further and to search for specific elements of missing information.

The final procedure in the sequence was theme analysis, the task of discovering superordinate relationships that integrated two or more domains. According to Spradley (1979, 1980), this step is necessary so that the researcher may go beyond simply identifying and cataloging discrete domains to arrive at a holistic understanding of the cultural scene. The researcher found a single overarching cultural theme that organized most of the relevant domains. This cultural theme, which entailed maintaining a context in which hearing impairment was a normal condition, will be discussed in depth in Chapter IV.

### Methodological Issues

#### Validity

The strength of an ethnographic study lies in its validity (Magoon, 1977); the essence of validity in qualitative research is accuracy in collecting and analyzing data (Kirk & Miller, 1986). The researcher followed recommended procedures necessary to achieve a high level of validity in his fieldwork and analysis (Becker, 1958; Kirk & Miller, 1986; Wolcott, 1975). The central issues here were (a) taking researcher bias into account, (b) devoting sufficient time to fieldwork, (c) gaining informants'

trust, and (d) triangulating data. To these ends, the researcher took the following measures:

1. The researcher acknowledged potential sources of bias and took them into consideration as he collected and analyzed data. The researcher also kept a record of the conditions under which data were collected and analyzed.

2. The researcher conducted the fieldwork over the entire school year. He spent a total of 124 hours, or approximately 3 1/2 hours per week, during this phase of the study. This schedule satisfied the recommendations for time spent in field (Wolcott, 1975).

3. The researcher gained the trust of his informants by maintaining a consistent role, interacting openly and honestly with them, and protecting their confidentiality. He also monitored the informants' perceptions of his role and activity in order to evaluate the level of trust he was accorded by informants.

4. The researcher utilized a variety of sources and sought multiple instances of data in order to confirm that data were "independent of accidental circumstances of the research" (Kirk & Miller, 1986, p. 20). In addition to seeking multiple pieces of confirmatory evidence, the researcher also searched for and attempted to reconcile inconsistencies in the data.

5. During the course of the study, the researcher discussed specific issues with Mrs. Brooks, the informants'

teacher, and a final copy of the report of the findings was submitted to her for her confirmation. The researcher also discussed procedural questions and certain preliminary data analyses with one of his professors and a panel of fellow students who also had some expertise in qualitative research.

Despite his careful attention to these procedures, three factors beyond the researcher's control may have disturbed the validity of the study. The researcher took careful measures to minimize their effects, but they are discussed here in the interest of disclosing fully the conditions within the study.

First, the researcher's age may have influenced informant's actions during observations and during their participation in interviews. The researcher was careful to earn the trust of the informants and to maintain his role as a friendly, nonthreatening adult, but no doubt his age intruded into the study in subtle ways.

Second, the parents of one student declined to give their informed consent for her to participate fully as an informant, and the researcher was not able to include her in the interviews. These parents lived a considerable distance from the researcher and they had no telephone. Consequently, the researcher's attempts to gain their consent were limited to a series of letters, and these efforts failed. Despite the fact that the 10 other

students participated fully as informants, her absence from the interview phase resulted in the loss of some data.

Third, two crises occurred in the researcher's personal life during the year of the study. The researcher was able to continue visiting the site and made conscientious efforts to counteract their effects as he collected data. Later, the researcher examined the data collected during the visits following each of the two events. He found these data to be sound. The researcher remains confident that the effects that these events might have produced on the study were minimal.

#### Ethical Issues

As the qualitative researcher becomes an accepted member of the social scene under study, he becomes able to observe routine and authentic events and conversations. As he develops trusting relationships with informants during interviews, he may learn deeply personal and sometimes sensitive information about them. It is essential, therefore, that the informants' identities be protected vigorously (Everhart, 1975; Lutz & Ramsey, 1974).

The researcher took careful measures to safeguard informants' privacy. In all written records, information that would allow the informants or the setting to be identified (physical descriptions, characteristic behaviors, etc.) were disguised. Rather than informants' actual names, pseudonyms were used in all written records.



Immediately after each interview was transcribed, the audiotaped recording of the interview was erased. In addition, procedures required by the University of Florida Institutional Review Board were followed scrupulously. The researcher obtained the informed consent of parents and all informants before interviewing them. Before each interview, the researcher reminded the informant of the nature of the research, and encouraged the informant to ask questions about the process and purposes of the research. The researcher also explained to the informant that he or she needed not disclose personal information, and that he or she had the right to withdraw comments from the data at any later time.

#### Researcher Qualifications and Bias

Because the researcher was the primary instrument of research, it is important that the researcher acknowledge the biographical factors that might have exerted an influence on any aspect of the study (Lutz & Ramsey, 1974; Metz, 1983; Wilson, 1977). This information includes the experiences and skills that enabled the researcher to perform the study with competence. The researcher's qualifications for conducting this study were as follows:

1. The researcher's parents were teachers of hearing impaired children.
2. The researcher's father was deaf, and the researcher is fluent in American Sign Language.

3. The researcher earned a master's degree in education of the hearing impaired, and taught elementary and secondary hearing impaired students for a total of 8 years.

4. The researcher was familiar with middle school theory and practice.

5. The researcher successfully completed five courses in qualitative research, including two courses in ethnographic methods and theory.

6. The researcher conducted three qualitative studies of hearing impaired students; one of these studies was an educational ethnography of a middle school setting.

It was also imperative that the researcher acknowledge his background experiences and biases that might have distorted the collection and analysis of data and the reporting of the findings. In so doing, the researcher was better able to counteract those subjective influences. They are reported here so that readers have an additional means by which to judge the merits of the study.

1. The researcher possessed a constructivist perspective, that knowledge of reality is socially constructed and that students may contribute to creating and maintaining the partial reality of school.

2. The researcher believed that hearing impaired early adolescents are suitable informants; that is, capable of disclosing through their activities and through

participation in interviews their explicit and tacit knowledge of their social reality.

3. The researcher believed that student perceptions are elemental educational concerns: Educators cannot educate effectively without adequate knowledge of their students; and deeper knowledge of students leads to more effective instruction and learning.

4. The researcher believed that socialization is a critical element in the education of all hearing impaired students, especially for students in a regular educational context.

5. The researcher's personal and professional background included a long-time familiarity with hearing impaired persons and their education, and with general educational theory and practice. His professional duties during the year of the study included supervising interns in hearing impaired classrooms.

During the study, the researcher made conscious and consistent efforts to minimize the influence that these experiences might have on the study. However, these experiences no doubt intruded upon the research in subtle ways that the researcher did not detect.

#### Summary

The researcher selected an optimum site for the study and followed recommended procedures in gaining entry. He regularly devoted 3 1/2 hours per week to fieldwork for an

entire academic year. The researcher worked to gain the trust of his informants and to guarantee their protection. Participant observation, ethnographic interviewing, and unobtrusive measures were the primary procedures he used to collect data. The researcher was mindful of his biases as he collected and analyzed data. During and after fieldwork, data were analyzed carefully according to accepted ethnographic procedures. The findings that resulted from these efforts are discussed in Chapter IV.

CHAPTER IV  
HEARING IMPAIRED STUDENTS IN A MIDDLE SCHOOL  
Introduction

The purposes of this study were to describe and explain the social processes and cultural themes within a group of hearing impaired early adolescents and to examine the meaning that a middle school context had for these students. The findings in this study resulted from the application of Spradley's (1979, 1980) Developmental Research Sequence. Working within the guidelines of this procedure, the researcher observed and interviewed the informants, recorded data in field notes and on audio tapes, and typed protocols from field notes and recordings. Over the course of the study, the protocols were analyzed using domain and taxonomic analyses, which provided direction and focus for subsequent observations and interviews. Toward the end of the fieldwork period, constituent analyses were utilized to examine a number of taxonomies that needed closer investigation. After the fieldwork was completed, a theme analysis was conducted over the set of relevant domains. This analysis yielded a rich overarching cultural theme, briefly characterized as the collaborative maintenance of a social context in which hearing impairment was a normal condition.

Further analyses were then conducted to provide insights into the informants' social processes. Evidence was found that the group was indeed engaged in social activities that could be characterized as secondary socialization according to Berger and Luckman's (1967) six features of this phenomenon: (a) Members of the group assumed roles specific to the group, and behaviors in these roles was governed by norms; (b) individuals acted as significant others in maintaining the social reality for other members in the group; (c) a specialized vocabulary was used to name and define particular features of the group; (d) legitimations, both verbal and nonverbal, were used to maintain the social reality of the group; (e) a means of socializing new members was in operation; and (f) routines and tacit understandings operated to maintain the reality of everyday life within the social context.

Finally, the data were analyzed to reveal and explain students' perceptions of the features of the middle school. Team membership and advisor-advisee groups stood apart as most meaningful to the students, but the value students placed on these two factors was not as great as the value they held for membership in their group. Thus, the findings will be discussed in three sections: the cultural theme, the social processes, and students' perceptions of middle school.

### The Setting

Edison Middle School is situated in a relatively quiet residential neighborhood in Charlesberg, a moderately sized city in the southeastern United States. (All proper names in this study have been changed to protect the identity of informants.) The campus is quite large, and the school buildings were set back a considerable distance from one of the city's major streets that borders the campus. The well-tended lawn at the front of the school is dotted with several varieties of trees, oaks, primarily, which provide an attractive presentation of the school to the street and offer pleasant, comfortable gathering spots for students before and after school. A semicircular drive enters this lawn from the south and opens into a parking lot along the north side of the campus. To the north and south of the campus are older single-story residences constructed on small lots. An expansive open field lies to the east; sections of this field are used as playing fields for a variety of sports and recreational activities.

During the year of the study, the population of the student body at Edison numbered just over 1,000; a large minority of the students qualified for free or subsidized lunches. The student body was divided into six interdisciplinary teams, two at each grade level. Besides the regular academic classes, Edison also provided special instruction for hearing impaired students and for students with

varying exceptionalities (learning disabilities, mental retardation, and emotional disturbances).

The single-story flat-roofed school buildings are constructed of concrete block. Even though they are set on an attractive campus, the exterior of the buildings might tend to give the casual observer the impression that they had been built more for function than for aesthetic purposes. Classrooms and offices are generously supplied with large windows. Classrooms are arranged in three wings; the corridors within the wings and those connecting the wings are wide. The school offices are located in the west ends of the south and middle wings. During the year of the study, the classroom for hearing impaired students and classrooms for students with varying exceptionalities were located in the east end of the north wing.

The classroom for hearing impaired students seemed quite large, considering that the population of this group had remained under 15 students for the past several years. A large round table was centered before the east wall; there was space enough at this table for all 11 members of the student group to sit comfortably, and activities that included all students were usually conducted there. Two pairs of carrels and four rectangular tables were situated in the remaining space; these were used for individual and small-group activities. Two office desks were situated at the northeast and southeast corners of the



room; the former was used by the teacher, and the latter, by her aide. Seven large high windows spanned the length of the north wall, illuminating the room with natural light even on the cloudiest of days.

### The Informants

Members of the group included in this study consisted of 11 students and 3 adults (the teacher, her aide, and the students' interpreter), all of whom were regularly engaged in frequent daily interaction. All 11 students were included in the observations; one student's parents did not grant permission to include their daughter in interviews, so only 10 students participated fully as informants. At the beginning of the study, there were 8 students, 2 eighth graders, 2 seventh graders, and 4 sixth graders. During the year, 3 new sixth graders entered the group, one in November, and the other 2 in January.

In order to describe the students more definitively for this study, it is necessary first to discuss the two communication modes that they used and to characterize students' performance in each. Most students could utilize the auditory mode (normal spoken communication) with some success. The visual mode included the use of lipreading, signs, and fingerspelling. Lipreading entailed attending closely to an individual's mouth as he or she spoke in order to supplement the auditory components of speech with visible information. Some students could also use

lipreading to comprehend some messages that were produced without voice. Fingerspelling was the use of the conventional manual alphabet to spell out words letter by letter. This was accomplished by forming sequences of letters on one hand while holding the hand in a stationary position. Signs were formed by combining conventionalized hand configurations and movements of the arms to produce discernable patterned motions that were equivalent to words and sentences in spoken English. For conversational purposes, signing was preferable to fingerspelling because it was much faster and easier to produce and receive. Fingerspelling was permissible in conversation, but usually only when the sign for a needed term was unknown. Fingerspelling terms for which signs were available was negatively sanctioned.

Students with high performance in the auditory mode were generally successful in one-on-one communicative exchanges in which speech alone was used. The speech of these students was understandable, even if it was different in some ways from normal speech. These students could use their hearing with some success in close conversation. Most reported that they also used lipreading to improve their understanding of other speakers.

For the purposes of this study, two students were classified as having moderate performance in the auditory mode. These students often understood other speakers

successfully in close conversation. However, the quality of their speech interfered with their being understood by persons unaccustomed to conversing with them.

Students with low performance in the auditory mode had noticeable difficulty in one-on-one voice-only exchanges. Their limited hearing and lipreading abilities often resulted in misunderstanding other speakers. Their speech was seldom comprehensible even to persons accustomed to conversing with them.

Characterizing student's performance in the visual mode is somewhat simpler. Students with high performance in this mode possessed an extensive sign vocabulary and used signs fluently, either alone or with speech. Students with low performance had a noticeably smaller sign vocabulary, signed more clumsily than fluently, and usually preferred not to sign.

Aside from these communicative differences and the small ear-level hearing aids that most of the students wore, these students were indistinguishable from the other students at Edison. Their general behavior, their physical appearance, their clothing, and the books and other possessions that they carried were comparable to those of the other students at Edison. Eight of the students were hard of hearing; three, Carey, Jay, and Scott, were deaf. In the descriptions below, the student was the only hearing

impaired member of his or her family unless otherwise noted.

Kate, the only eighth-grade girl, was generally cheerful and personable. She was of medium height and had short, dark hair that framed an animated, puckish face. She lived with her family, both parents and a younger brother and sister, in Welachee, a small town some 45 miles from Charlesberg. She had attended public school in Virginia for two years before her family moved to Welachee. Since that move, she attended Whitney Elementary School (which has special classes for hearing impaired students) in Charlesberg before coming to Edison. She was mainstreamed for five of her six academic classes during the year of the study. Kate's performance in both communicative modes was high.

The other eighth-grade student was Warren, a tall wiry boy who lived with his parents and older brother in Evansville, a small town near Welachee. Warren was a key member of several athletic teams at Edison, and was mainstreamed for AG (agriculture), math, and physical education. He attended Whitney for 3 years, and then public elementary schools in Georgia before returning to Evansville during his sixth-grade year. He had attended Edison since sixth grade. Warren's performance in the auditory mode was high, but it was low in the visual mode.

Alicia, the only seventh-grade girl, was one of the two Black students in the group. She was slender, of medium height, and her face was usually cast in a pleasantly serene expression. Her calm demeanor, initiative, and low tolerance for frivolous behavior marked her as one of the most mature students in the group. Alicia lived in Charlesberg with her mother and an older and younger brother, all of whom had hearing impairments. She began preschool at Whitney and had continued in classes for the hearing impaired in Charlesberg since that time. Alicia was mainstreamed in AG, math, and physical education. The level of her communicative performance was high in both modes.

Brent, a slightly pudgy boy with curly blond hair, was the other seventh-grade student. His wry grin and twinkling eyes matched his zest for wisecracks and comic behavior. Brent lived with his parents in Palmetto, a small town near Welachee. He had attended classes for the hearing impaired in Charlesberg schools through seventh grade. This year, he was mainstreamed in AG, math, physical education, and social studies. His performance in both communicative modes was high.

Jay, one of the three boys in sixth grade, grew up in Eaton, a small town near Charlesberg, and attended Whitney for 6 years before coming to Edison. Short and slim, Jay was quite animated. He made liberal use of good-natured

teases and of insults that sometimes bordered on the malicious. He lived with his mother and an older sister. Jay was mainstreamed in art and physical education. His level of performance in the visual mode was high; it was low in the auditory mode.

Robin, a sixth-grade girl, attended school in Pennsylvania through fourth grade. When her family moved to Welachee, she entered the fifth grade class for the hearing impaired at Whitney. She was tall, slender, and quite personable, often flashing a winsome smile. She lived with her mother, her stepfather, and two younger sisters. Like Jay, she was mainstreamed in art and physical education. Her performance in both communicative modes was high.

Scott, a sixth-grade boy, lived with his parents, two younger brothers, and an older sister in Riverton, a small town 30 miles west of Charlesberg. He was of medium height, stocky, and had a calm disposition. Scott attended school through third grade in Riverton and then entered the hearing impaired program at Whitney. His mother had a hearing impairment. He was mainstreamed in art, math, and physical education. His performance in the visual mode was high; it was low in the auditory mode.

Carey entered the sixth grade at Edison in November when her family moved to Welachee from Indiana. She was short and slender, had long sandy hair, and was quite personable and energetic. She lived with her parents and

had an older sister in college in Indiana. Carey was mainstreamed in art, math, and physical education. Her sign performance was high, her auditory performance, moderate.

Marcie, an only child, entered the sixth grade at Edison in January when her parents moved to Charlesberg from Georgia. She was tall and chatty, had short dark hair and a generally pleasant disposition that was interrupted by occasional moments of sullenness. Marcie attended classes for the hearing impaired in first and second grades, and then entered a magnet program for gifted students. At Edison, she was mainstreamed in all of her classes except language arts. Her performance in the auditory mode was moderate; in the visual mode, it was low.

Tony, who also entered the sixth grade at Edison in January, moved from West Virginia to Charlesberg with his mother, stepfather, and three younger sisters. His father, two sisters, and two uncles also had hearing impairments. Tony was short, had short dark hair and an infectious smile, and was generally quiet and reserved. He was mainstreamed in art, math, and physical education. His performance in the auditory mode was high, and in the visual mode, low.

Leslie, the only student whose parents refused permission for her to be included in the interview phase of the study, was a short, slender sixth grader. She had a merry

laugh, was generally quiet, but was given to moments of boisterousness. Leslie was one of the two Black students in the group. She lived with her parents in Charlesberg, and attended Whitney for 6 years before coming to Edison. Leslie had an older sister who was hearing impaired. She was mainstreamed in art, math, physical education, and social studies. Her communicative performance in both modes was high.

Three members of the staff at Edison were closely associated with the group of hearing impaired students. Elizabeth Brooks, a teacher who had held certification in hearing impairment for 6 years, served as the students' homeroom teacher and taught them in special education classes in all subject areas. Mrs. Brooks was tall, personable, and even-tempered. She had short sandy hair and a pleasant, expressive face. It was immediately evident that she enjoyed working with her students and that the regard she held for them was reciprocated. Nancy Elliott served as Mrs. Brooks' classroom aide and also drove the Welachee bus to and from Edison. Mrs. Elliott had long dark hair and a sunny disposition. She assisted Mrs. Brooks with clerical work and tutored students individually and in small groups. Douglas Wood, a personable and effusive man of medium height in his mid-40s, served as the students' interpreter in their mainstream classes. He also interpreted the morning intercom announcements during AA



(the advisor-advisee period) and occasionally tutored students.

### The Typical Day

A routine day at school for the hearing impaired students resembled the typical day for nonhandicapped students in many respects. Students who lived in outlying communities did spend more time being transported to and from Edison, but once the students had arrived, most of them entered the stream of activities pursued by their schoolmates. Before school, the front campus and the north garth were thick with small groups of students numbering from pairs to upwards of a dozen students each. The majority of these groups contained students of only one gender or the other. Boys in the hearing impaired group usually joined a group of hearing boys in one of several varieties of ball games that were played in the few minutes before the beginning of classes. The hearing impaired girls usually formed small groups and chatted among themselves; hearing students rarely joined them. Robin and Kate, very close friends, were more conspicuous than the others in that they often remained in the parking lot to chat in privacy.

Just before the first bell, students began to move toward the doors of the building; when the bell chimed, these throngs rushed boisterously into the halls and classrooms. All the hearing impaired students began their day

in Mrs. Brooks' classroom. In the moments before the second bell, they milled about the classroom, teasing, chatting, or hurriedly finishing homework due that day. The Pledge of Allegiance marked the beginning of this mod (academic period). Just before it was recited over the intercom, Mrs. Brooks moved to the west wall and stood beneath a small U.S. flag. The students rose and followed her lead at reciting the Pledge, most of them signing without voice. Then they sat and oriented toward Mr. Wood as he interpreted the intercom announcements.

For the remainder of this AA mod, students engaged in one of several activities, depending on the day of the week. On Mondays, DEAR (Drop Everything and Read) was scheduled, and everyone in the classroom read silently until the beginning of first mod. On Tuesdays and Wednesdays, RATS (Raising Achievement Test Scores) was scheduled, and students rehearsed test-taking skills in activity booklets. Thursdays and Fridays were set aside for affective activities. During these times, Mrs. Brooks directed discussions about a variety of topics relating to students' personal development, or school-wide issues or activities.

During the academic mods, Mrs. Brooks taught smaller groups of the students while others attended their mainstream classes. The students who remained were not always scheduled by grade level. As examples, Mrs. Brooks taught reading to Alicia, Brent, and Kate and math to Jay and

Robin during first mod. During fifth mod, all the students except Kate and Marcie returned to her classroom for science. Mrs. Brooks utilized both individualized and group instruction. The latter type frequently entailed group discussions and cooperative learning activities, which allowed students to interact closely in small groups with other students of different ages and grade levels. Besides engaging in academic pursuits, students also had some opportunity to interact casually with others.

Lunch at Edison was somewhat orderly, usually hurried, and always clamorous. Students joined one of two surging lines that led, respectively, into one lunchroom where hot lunches or a salad bar were available, or into another lunchroom for pizza. As students moved from the food lines, members of the Edison staff directed them toward seats so that the tables were filled completely and in sequence. This practice allowed the hearing impaired students to sit together in groups, which they generally did. In these groups, the students most often interacted among themselves, usually in signed conversations. Occasionally they engaged in brief exchanges with hearing students, but these were frequently either quick teases or perfunctory negotiations for food exchanges conducted primarily by means of gestures.

After lunch, Marcie attended a mainstream science class and Kate went to her mainstream social studies class.

The rest of the hearing impaired students returned to Mrs. Brooks' classroom for science.

Kate attended mainstream science class during sixth mod, Brent went out to math, and Alicia went to AG. Warren and the sixth graders attended reading class with Mrs. Brooks.

During seventh mod, the sixth graders attended their mainstream art class. Warren went out to physical education, Brent went to AG, Alicia went out to math, and Kate worked as an aide with a regular teacher.

The school day ended after seventh mod. Because buses and cars awaited all the hearing impaired students, they made their exit with deliberate speed and without joining any of the student groups that lingered for a short time after school.

During the academic mods, Mrs. Elliott was usually present in Mrs. Brooks' classroom to assist Mrs. Brooks and the students. Mr. Wood accompanied individual students and student groups to their mainstream classes. He interpreted for the sixth graders in math, physical education, and art, for Kate and Warren in their math class, for Brent in social studies, and for Kate in social studies and science. In those classes, Mr. Wood situated himself close to the front of the classroom and to one side; the students also sat at the front of the classroom so that they could see him without difficulty.

This schedule was followed routinely with two exceptions. On Mondays and Tuesdays the students went to Helen Franklin for speech instruction. Ms. Franklin, a newly arrived member of the Edison staff, served as the speech teacher for the entire school. She taught the hearing impaired students in small groups and also provided individual instruction to hearing students with speech disorders. She was congenial and energetic; her proficiency in sign was low. Ms. Franklin's classroom was small, and the students sat at a single rectangular table for the learning activities. The sixth graders attended speech class as one group, and the seventh and eighth graders went together as another. On Fridays, the academic mods were shortened and students who had earned the privilege could engage in a variety of activities during the remainder of each period.

The hearing impaired students were also members of the interdisciplinary teams at Edison, and over the course of the school year, they participated with their hearing teammates in intramurals, field trips, and other special activities. Mrs. Brooks planned several field trips for her group alone, and the group participated in outings with the other special education classes, as well.

Despite their seemingly full participation in the stream of academic and nonacademic activities at Edison, the students were frequently set apart from their

nonhandicapped schoolmates. Some of this isolation was by necessity and design, as in the special classes they attended and their regulated seating in mainstream classes when Mr. Wood was present to interpret. At other times, such as when some of the students formed their own groups before school, during lunch, and during Friday free time, the segregation was carried out by their own choosing. At those times, the hearing impaired students interacted freely and casually with one another, knitting the social fabric that bound them together as a distinct group. It was primarily the interactions in those segregated contexts for which this study was designed.

Cultural Theme: Normalizing Hearing Impairment

To be placed in Mrs. Brooks' class, a student had to have a hearing loss that impeded normal vocal communication. To hold full membership in the social group, a student had to possess certain information and attitudes about hearing impairment and a set of specialized communication skills, all of which operated to maintain a context in which hearing impairment was a normal condition. The adults who were associated with the student group also shared in this knowledge to varying extents, and participated in promoting normality within the group.

The primary liability of impaired hearing was not perceived by members as diminished hearing per se, but rather, as the disruptions it produced in vocal exchanges

with hearing people. In close face-to-face conversations, the hard of hearing students could understand their hearing partners most of the time; still, they occasionally experienced some difficulty. As Robin put it, "I can hear, but sometimes I go, 'Huh?'". Marcie's speech was somewhat difficult to understand; the others could be understood by hearing people without much difficulty; all had speech that was noticeably different. The deaf students, of course, experienced greater and more frequent difficulties in their attempts at vocal communication with hearing persons. In addition to these difficulties, the students perceived that signing, wearing hearing aids, and using an interpreter, all necessary concomitants to hearing impairment, marked them as being different from their hearing schoolmates. As a result, most members of the group often avoided interacting with hearing schoolmates altogether or restricted their interactions to a few select friends outside the group.

The student informants were not continuously aware of the differences that accompanied their hearing impairment, and most of the time, they did not consider those differences to be of great magnitude. Instead, they generally considered their differences more as inconveniences, sources of mild uncertainties and disquietudes that intruded intermittently into their daily lives. Occasionally, informants feared being embarrassed or being devalued by others. Regardless of the degree of severity, the

discomforts were real and meaningful to the students, and they figured decisively in their life at school.

Although the disquietudes associated with hearing impairment were obvious and inescapable in integrated contexts, they could be minimized or eliminated when no hearing students were present. In segregated contexts, students could openly display the concomitants of hearing impairment without concern about being perceived as different. Mere privacy for the group was not sufficient, however; normalizing hearing impairment required cooperative efforts, both overt and tacit. Students were obligated to share certain perceptions of hearing impairment, have particular information about each student's hearing impairment, know how to sign, participate in making communication accessible, and avoid certain sensitive topics relating to hearing impairment. Adult members of the group shared in many of these endeavors and worked in other ways to counteract the students' communication difficulties.

#### Perceptions of Hearing Impairment

Perceptions of hearing impairment common to student members of the group included five elements of contrast between themselves and their hearing schoolmates. The students perceived that they were different from their schoolmates in that their speech was different, that they used signs, they used an interpreter, they wore hearing



aids, and their access to regular classes was restricted. Students also shared certain social self-perceptions regarding these notions of hearing impairment.

### Perceptions of signing

All members of the group found it necessary to sign. Signing made communication visible, and therefore, accessible to deaf partners in discourse. Under certain conditions, it was also necessary for hard of hearing students to sign to each other. Signing only in the presence of members of the group was safe, but signing in the presence of hearing schoolmates marked the students as being different. The students' perceptions of hearing students' attitudes toward signing varied:

Researcher: You can sign out there (in mainstream classes) and most of the hearing kids can't sign, right?

Scott, signing: They try to copy us.

Researcher: Oh really? Are they teasing, or are they really trying to learn?

Scott, signing: Teasing.

Researcher: How do you feel when they copy you?

Tony (forcefully): I just don't like it.

Scott (smiles and shrugs his shoulders, then signs): I don't care.

Irrespective of the nature of the judgments about signing ascribed to hearing students, members realized that signing set them apart. Students' attitudes toward this difference ranged from mild discomfort to deeper embarrassment.

### Perceptions of hearing aids

Most of the students wore hearing aids regularly and believed them to be an indispensable element of everyday

life. Students also believed that their hearing aids were objects of curiosity to other students, and as a result, sometimes a source of embarrassment for themselves:

Brent: {Hearing students} always ask me what I got in my ear. And I get upset sometimes. Cause I don't like when people say, "What you got in your ear?"

Kate: It's just like, I just get, you know, irritated when people go "What's that?" and "What does it do?" and "Why do you have it on?" and all that stuff. I get tired of explaining the whole time.

#### Perceptions of limited access to regular classes

Informants realized that the condition of hearing impairment limited their access to regular classes:

Researcher: How are you different from the other kids in this school?

Warren: Oh, because we have hearing aids, and uh, see, like we can't hear well, and we can't go to regular class because we can't hear well.

The amount of participation in mainstream classes varied across students. All of them had at least one special academic class with Mrs. Brooks and were mainstreamed in from two to six other classes. Students were not perturbed by their differential placement in mainstream classes but they did perceive the restricted access as a difference between themselves and the other students at Edison.

#### Perceptions of using the interpreter

The presence of the students' interpreter in their mainstream classes restricted their seating and manner of participation. Typically, Mr. Wood positioned himself at the front of the classroom and to one side, and the

students sat directly in front of him. When the teacher or any of the hearing students spoke, Mr. Wood signed and the hearing impaired students attended to him. Students with comprehensible speech could respond directly to the teacher; the others responded to Mr. Wood, who interpreted vocally for them. Students experienced some mild discomfort with this arrangement, again perceiving the procedure as an indication of their difference from the other students.

#### Perceptions of differences in speech quality

Students' speech quality varied in degree of comprehensibility to hearing people. Warren's and Kate's speech was very close to normal; Jay's and Scott's vocalizations were practically indecipherable. The other students' speech quality ranged between these two extremes. Some students were quite sensitive about their speech, and others regarded theirs with less discomfort. Still, students were aware of the differences between their speech quality and that of the normally hearing students, and they incorporated this attribute into their perceptions of hearing impairment.

Students' perceptions of their differences from their hearing schoolmates and the attitudes associated with their perceptions contributed to the necessity of creating and maintaining a social context in which those differences could be disregarded. Had they not perceived any

differences, or had they been entirely at ease with any differences they perceived, they would not have felt the need to counteract them. But the perceived differences and the occasional disquietudes associated with them encouraged the students to collaborate in instituting and sustaining a social context in which hearing impairment could be a normal condition.

#### Knowledge of the Hearing Ability of Others

Degrees of hearing loss varied across students in the group, and informants were keenly aware of the differences. During observations of the group, it became evident that members were capable of judging the hearing ability of others in the group, and that they usually did so accurately and with facility. Informants used only two terms to refer to student members of the group, deaf and hearing impaired (the latter was equivalent to the conventional term hard of hearing, which members of this group never used). The apparent simplicity of this dichotomy was deceptive, however. Hearing acuity, in the pure sense, was rarely utilized alone as a criterion in making such judgments. Students fused notions of hearing acuity with perceptions of the communicative competence of their classmates. That is, hearing impairment was defined in social terms, and students classified each other not only on the basis of their hearing ability, but also according to their communicative abilities and needs.

Investigation of this capacity was pursued in interviews by asking informants to sort others into groups according to their hearing ability. Informants were then requested to explain the reasoning they used to form their categories. Four criteria were commonly applied by the informants. In each of the categories below, the quoted explanations are representative of those given by other informants.

Perhaps the simplest means was judging how another student responded when his or her name was called. The application of this criterion typically resulted in three categories, students who responded immediately, students who responded only after several calls, and students who were not able to respond to a vocal summons.

Researcher (after Brent has formed three groups): Ok. How do you know?

Brent: Cause I just know.

Researcher: You just...OK. I'm really interested in how you think you know that.

Brent: Cause whenever I call Kate, she hears. Whenever I call Warren, he hears. When someone calls me, I hear fast. When I call them {Alicia, Leslie, and Marcie}, they sometimes can't hear. When I call them {Jay and Scott}, they can't hear.

A second means was relating hearing aid use to degree of hearing. Most of the students in the group wore hearing aids, and it was a simple matter to associate the wearing of a hearing aid with impaired hearing. But infrequent use signaled one of two extreme conditions. In one condition, the individual's unaided hearing might be sufficient for

him or her to get by without a hearing aid. In the other, the hearing might be so poor that the individual received little benefit from the hearing aid.

Researcher: OK. These people can't hear very well. These people hear really well. How do you know? How did you find that out?

Robin: You see, Jay, he's kind of deaf and don't wear his hearing aid a lot....And Tony can hear more because he don't wear his hearing aid and just lost a little bit of hearing.

The third criterion involved judging an individual's ability to comprehend vocal communication. Two categories appeared for this classification: students who could get by with using vocal communication alone and students who could not converse by vocal means alone, but required the support of signing.

Researcher: So, you say Kate, Warren, and Tony hear the best?

Robin: Yes. And these can hear, but they're kind of like they can miss words. And these cannot hear well....These people, I have to sign.

The fourth criterion was a classification of students according to their ability to produce intelligible speech. Two categories were common here, students whose speech could be understood, and those whose speech was not comprehensible.

Researcher: How do Jay and Scott talk to you?

Kate: Sign language.

Researcher: OK. What happens if they don't use sign?

Kate: We don't talk....They just don't talk right. You know, you just can't understand them. Some people can, but I can't.

In stating and explaining their definitions of hearing ability, informants revealed that they used a common set of criteria, only partially based on perceived degrees of hearing acuity. Most of the meanings associated with hearing impairment were bound up in fundamental social operations, specifically, the individual's capabilities to engage in discourse successfully. For students, then, the term hearing impaired contained a category of meanings that allowed students to make fundamental assessments of the communicative abilities and needs of their classmates. Competent use of this classification system was necessary for individuals to participate fully and smoothly within the group.

#### Ability to Sign

In order for an individual to participate fully in social interactions within the group, some knowledge and use of signs was obligatory. During the time before any new students arrived, Warren was the only student in the group whose sign performance was noticeably low. He had to be reminded a number of times to use sign, and Jay and Scott occasionally complained about the quality of his manual communication. Marcie and Tony entered the group in January with practically nonexistent sign skills. Early in February, Marcie was using fingerspelling and signs haltingly; by early May, she was holding her own in brief sign-only conversations. Tony, too, was beginning to use

sign in February, and was engaging in brief sign-only exchanges in March. The importance that students placed on knowing signs was expressed in several interviews; one of Alicia's comments is particularly revealing:

Researcher: If a new person came into this group, what are some things you would do to help that person learn about the school?

Alicia: Make, teach him, teach that person sign language.

Researcher: OK.

Alicia: And be friends with them.

Although several students reported having learned to sign through direct instruction provided by teachers and other students, observation data did not reveal any prolonged episodes of direct sign instruction. Occasionally, a student or an adult would supply a sign to another during conversation, either spontaneously or upon request. The primary means of learning signs was through observing and imitating others:

Researcher: You started learning to sign at Whitney?

Kate: I already knew the alphabet a little bit.

Researcher: Did you learn that in Virginia? (Yes) So you went to Whitney and learned how to sign over there. (Yes) How long did it take you?

Kate: The teacher told me about like a few months. They said I was a pretty quick learner.

Researcher: OK. Did you learn from the teachers? From other students?

Kate: I learn by watching them. They talk to me and sign, so I learn by watching them.

Researcher: What happens when somebody new comes here? Somebody who doesn't know how to sign. How do they learn?

Kate: When Tony and Marcie were new, they



didn't know sign language at all. And they learned by watching us. We sign all the time, and they learned by watching us. If you be with people that sign all the time, then you learn faster.

Carey was already proficient in sign when she entered Edison in November, but she had learned to sign in Indiana, and some of her signs were different. In the early weeks after her arrival, other students were observed supplying signs for words she fingerspelled and shifting to finger-spelling when she misunderstood a local sign.

Robin: {Carey} is from Indiana, and she {learned to sign there}. But the sign was different. It was real hard for Carey cause she had {to} spell, spell, spell.

Researcher: Did she change her signs?

Robin: Yeah. She's changed now.

#### Making Communication Accessible

Full membership in the group also required that a student be able to utilize a variety of special skills and to regulate the mode of discourse so that exchanges could be conducted smoothly and successfully for all partners. Four specific skills were included here: (a) using an accepted means of getting a partner's attention; (b) selecting the necessary mode before engaging in discourse, or shifting modes smoothly when an exchange stalled; (c) knowing signs and including their use appropriately in discourse; and (d) engaging appropriately in exchanges that were interpreted.

Getting attention

Procedures for getting a partner's attention fell into three categories, techniques students used with other students, techniques students used with adults, and techniques adults used with students. Students used a variety of audible, visible, and tactile means to get each other's attention. The most frequent was simply calling the other student's name, but its use was most successful only when the intended partner was not deaf. When a name call went unanswered, the speaker repeated the call, sometimes with greater volume, or shifted to a visible or tactile act.

Visible means included waving and moving into the intended partner's line of sight. Tactile acts included touching another person, but this physical contact was restricted to tapping only the arm, shoulder, or knee. Shaking or rapping on a table that a student was touching was a second type of tactile strategy.

Students called for an adult's attention in either of two ways, by calling his or her name or by raising a hand. Although the former procedure was often used with other students, the later was not. These two acts usually obtained swift results, and other procedures were unnecessary and rarely undertaken. In fact, the use of certain student-to-student means to get an adult's attention could result in misunderstanding. On one occasion, Jay

misapplied one technique in an attempt to get Mrs. Brooks' attention:

Jay shakes the table; Mrs. Brooks looks around, then says to him: 'Hey! Hey! What are you doing that for?'

Robin, to Mrs. Brooks: 'He's getting your attention.'

Adults could call for a single student's attention by using any of the student-to-student strategies. There were times when an adult needed to get the attention of a large group of students. In these cases, he or she most often moved to a customary position in the classroom and addressed the group at moderately high volume, sometimes accompanying this by waving or rapping on a table. Occasionally, the adult turned the lights off and back on; on this signal, students oriented toward the adult at the light switch.

One additional procedure was common across all attention-getting acts. At times when an attempt to get attention failed, a third party assisted in the act:

Mrs. Brooks calls: 'Scott!'

Scott is looking at his sheet, which is now on the table. Robin taps the table; Scott looks at Robin; Robin points to Mrs. Brooks; Scott looks at Mrs. Brooks.

### Selecting appropriate modes

The second means of making communication accessible was selecting an appropriate mode before beginning to converse. The requisite decision here entailed knowing the intended partner's communicative abilities: Whereas two or

more hard of hearing students might converse using voice only, any conversation that included a deaf participant obligated all partners to use sign. Students with high sign performance could converse successfully in sign only, but the presence of a student with low sign ability required all participants to use voice. At times, judging conditions in the physical or social context was also necessary. In quiet surroundings, two hard of hearing students could conduct conversations using voice only; in noisy situations, such as the cafeteria, the same partners had to add sign or use sign alone. Students alternated among modes in order to conduct private conversations in the presence of others. If no one were watching them, students with high sign ability could converse in sign only without detection. Under similar circumstances, students proficient at lipreading could converse by using slightly exaggerated mouth movements without voice. When unwanted onlookers were attending, students sometimes erected barricades (books, sheets of paper, and so on) and signed or fingerspelled behind these so that the message was visible only to the intended partner. Finally, students could converse privately by signing in full view of persons who could not sign.

#### Shifting mode

In most conversations, participants selected the appropriate mode before beginning and conducted the

exchanges with ease and success. At times, however, a first attempt at discourse failed. This was most often signaled by the intended partner's merely assuming a puzzled facial expression or uttering a conventional "What?" or "Huh?" Following this signal, the speaker generally shifted mode (by adding sign to voice, as an example) smoothly and without any additional prompt. On rare occasions (most of these occurred when one of the newly arrived sixth graders was speaking) students had to be told explicitly to shift mode. Once in speech class shortly after Carey entered Edison, she responded to one of Ms. Franklin's questions using voice only. Robin remonstrated, saying "Sign! There are deaf people in here!"

Engaging in interpreting transactions was done as a matter of course within the group, because a variety of communicative situations called for the use of this type of mediation. The most obvious category included instances wherein adults interpreted for students in formal situations. Mr. Wood supplied the majority of interpreting service in mainstream classes. In certain of Mrs. Brooks' classes, she interpreted for students, as well. Typically, the need arose when Tony, Warren or Marcie and any of the three deaf students participated in the same class discussion. Mrs. Brooks signed for the deaf students as the others spoke, and interpreted vocally for the others when they had difficulty understanding the deaf students.

Students also interpreted for other students. Mr. Wood did not accompany students to speech class, and because Ms. Franklin did not sign, it was necessary for either Robin or Leslie to interpret for the deaf students. This included both signing to the deaf students as Ms. Franklin spoke, and voicing for Ms. Franklin occasionally when she had difficulty understanding deaf students' signed and spoken utterances. On rare occasions in Mrs. Brooks' class, a hard of hearing student voiced for a deaf student when he or she used a sign that Mrs. Brooks did not know.

Participating in any interpreted exchange placed specific obligations on all participants. The speaker or sender had to regulate the speed and clarity of the message so that the interpreter could understand it and reproduce it in good time. The interpreter was obligated to serve upon request, and to reproduce the message with appropriate speed. The receiver was obligated to attend to the interpreter. Finally, bystanders were obligated to stay clear of the line of sight between the interpreter and receiver. Most interpreted exchanges were conducted without incident, but when any requirement was violated, the importance of the participants' roles was made abundantly clear. In this example, students were relating current events items in Mrs. Brooks' social studies class:

Warren stands and begins a story on credit card companies lowering their interest rates. He says the dateline is Washington, D.C. and points this out on the map at the east board.

He signs as he does his story, but his signs are rather small and halting.

Robin, to Mrs. Brooks: 'Would you sign, please?'

Mrs. Brooks: 'He's trying. He's doing much better.'

Alicia, to Mrs. Brooks: 'Mrs. Brooks, sign for him.'

Warren: 'Yeah, sign for me.'

Mrs. Brooks (grinning): 'You mean make his hands move for him?' (She rises, moves to Warren's right side, and signs as he reads aloud.)

Robin, to Warren: 'Slow down. Mrs. Brooks can't catch up with you.'

On a field trip to a local zoo, Mrs. Brooks interpreted for the deaf students as the tour guide spoke:

As Mrs. Brooks interprets here, Carey is close to her. She calls for Scott and Jay to come closer so that they can see her better. Just later, Jay looks away while Mrs. Brooks is interpreting.

Mrs. Brooks, signing to Jay: 'Do you want me to interpret or not?'

Jay, signing: 'Yes.'

Mrs. Brooks frowns and imitates his looking all around.

On the same trip, Tony moved between Mrs. Brooks and Jay while she was interpreting:

Jay taps Tony, then signs: 'Can't see!'

(Tony points to a spot about a pace away from Jay's position, indicating that Jay should move if he wants to see.)

Jay, signing to Tony: 'Shut up!'

Besides using the obligatory means of normalizing communication, students also extended or modified their special forms of communication beyond situations that were purely necessary and functional. This versatility indicated that the students were not only comfortable and competent using specialized forms, but that they could also

enjoy the results of improvised forms that were playful and unique.

Warren mentions pizza, fingerspelling it P-I-Z-A.

Mrs. Brooks tells him that she should put the word on his spelling list. Then she asks him how they spelled it last year, and reminds him of the spelling. (This is done by using both the index and middle fingers to produce two Zs in a single motion.)

Warren respells 'pizza' with two Zs, then with three, and then with four. Then he says: 'Four pizzas for me!'

Robin, to Scott (calling spelling words): 'Forty.'

Scott signs '40'. Then he tries to spell it. He stalls twice, then slaps his left hand with his pencil and signs: 'Stupid my hand!' After this, he spells "forty" correctly.

On Alicia's word, she simultaneously spells aloud and fingerspells all but the last letter. For this, she fingerspells "d" but says "t" aloud. She pauses, and then says "d".

Mrs. Brooks: 'Your fingers were right, weren't they?

Alicia: 'Yeah. My mouth was wrong.'

#### Submerging Certain Facts of Hearing Impairment

Maintaining an environment in which hearing impairment was normal required members to possess and use certain knowledge and skills in their routine social encounters. This entailed approving the open display of all concomitants of hearing impairment necessary to effect smooth and successful discourse. Individuals also possessed private knowledge about hearing impairment which, if shared openly in the group, might remind members that they possessed characteristics that distinguished them from the world



outside the group. To avoid these unnecessary discomforts, members tacitly controlled the sharing of certain kinds of information: They virtually avoided some topics altogether. They broached some sensitive topics infrequently, and then only when necessary; in these cases, discourse was conducted succinctly.

This additional category of information appeared during the theme analysis, which ultimately organized the domains into the single cultural theme. Because fieldwork had been completed, the researcher was not able to pursue this category directly by interviewing informants. Mrs. Brooks did confirm this phenomenon in a later interview, however.

Among the most guarded of these negatively sanctioned topics was asking for or disclosing information about the cause or nature of anyone's hearing impairment. No student was seen discussing the cause of his or her hearing impairment during any observations visits; however, students recounted the origins of their hearing loss in interviews, some quite freely and at length:

{Excerpt from Warren's first interview.}

Researcher: What I like to do when I start is to get some of your biography. Tell me about where you were born, where you have been to school....

Warren (interrupting): I've been born in Charlesberg.

Researcher: Right here?

Warren: Yes. And, well, about two years, maybe, two years after I got born, I got {pause} I wasn't born deaf, but, and I got so {pause} I was a baby, and I got so excited and

I got about one years old and my grandfather, he race, my second grandfather, he live in Macon, he race in car, and uh, my mom got owner, manager of restaurant, and uh, so I was about, my birthday that day, my grandfather said he'd like to take me race car and I said sure. And that day my mom took me in the restaurant because she don't mop the floor because she too busy. I saw mayonnaise on floor, you know what I mean?

Researcher: What?

Warren: Mayonnaise.

Researcher: Oh yeah, mayonnaise on the floor. Yeah.

Warren: And they told me that sometime I take mayonnaise and put it in my mouth and I got so sick cause by germs and I about died and the doctor couldn't do anything. And one of the pills that I take it, it {damaged} my nerves, see, all my nerves. It lucky {it didn't} damage all my nerves, just my hearing. And uh, so they said, "That's not going to work, he's going to die. And there's nothing I can do." So I took it, and three days later, I want to sleep all that day. They check my heart and all that stuff. I was still alive. Three days later, I got better. I ain't dead yet. So I went home. And Grandpa, he called me and called me. I didn't hear him. That day, I got deaf.

Open discussion of the nature of one's hearing impairment was less restricted, but still rare. Some of the few instances of this topic were observed soon after new students entered the group. On Carey's first day at Edison, Alicia told her, "I'm between deaf and hearing." Although information of this nature was essential for selecting and altering modes smoothly, students reported that they gained such knowledge through less direct means. Rather than ask explicit questions, students used observation and trial and error to gain the information they needed.

Four students, Alicia, Leslie, Scott, and Tony, had close relatives who were hearing impaired. Three of these students participated in interviews, and spoke candidly and in some detail about these relatives and their hearing impairments. Yet none of these students were observed mentioning these facts in open discourse, nor were other students observed asking questions about them.

Hearing aids constituted a selectively restricted topic. It was taken for granted that most students wore aids, found them necessary, and experienced similar difficulties with them. Students freely complained about feedback and discussed malfunctioning aids, but these comments were seldom elaborated:

Robin enters speech class after the bell.  
Scott signs to Robin: 'You{re} bad. {You're} late.'  
Robin, also signing: '{I had a} hearing aid problem.'

Jay's aid produces feedback.  
Leslie looks at Jay, frowns, and signs: 'Turn {it} down!' Jay complies without answering.

{Here, Mrs. Elliott was sitting with Brent and Alicia as they took turns reading aloud.}  
 Now Brent begins reading.  
Mrs. Elliott, to Brent: 'She can't hear you. She only has one aid on today.'  
Brent: 'Why?'  
Mrs. Elliott: 'Her ear hurts.'  
Brent: 'OK.'

Students were not observed discussing their attitudes about hearing aids, either positive or negative, nor any of the advantages or difficulties the aids presented. However,

informants were quite willing to discuss these topics in interviews:

Researcher: You have hearing aids. Do you wear your hearing aids? (Scott has his on now; Jay does not.)

Scott, signing: Always in speech.

Researcher: Do you like your hearing aids?

Scott: No.

Researcher, now to Jay: Do you like your hearing aids?

Jay, signing: No.

Researcher: Lots of problems? Lots of work?

Scott, signing: People thump them. People go up and thump them. They'll break and I have to pay for it. Or they turn it off and I can't hear.

Warren: That's what I hate, you know right here. (He grasps the tube of his hearing aid) It bend your ears. It's aggravating.

Carey: I love hearing aids. They help me hear, you know. Sometimes in gym, I can't hear. It's stupid, it bothers me if I can't hear.

{Informant}: I turn it off when I don't like to hear.

Researcher: Tell me more about that, when you don't want to hear. When would that happen?

{Informant}: Like when my mom argues with my dad, stuff like that. My dad yells.

Robin: When I was a kid and went to another school in Pennsylvania, and the lunchroom was really too noisy, and I used to take them off and put them on my tray. Every time I'd get up and throw them in the garbage. And I didn't know they were there until I looked and "Oh my gosh! My hearing aids!"

Researcher: You don't wear them when you're asleep?

Kate: I want to, but I can't because they give me earaches.

Two informants had close-caption decoders at home, and during interviews, told of the benefits of watching

captioned television programs. Neither was observed discussing these instruments in the group, however.

In open discourse, students rarely made judgments about others' signing performance and never evaluated each other's speech. In interviews, however, informants spoke freely and candidly about these qualities:

Jay, signing: Warren and Kate talk best.

Marcie: Tony and Carey can talk except sometimes their voices aren't, you know, like how Carey talks. And sometimes it's like that. Like how Carey talks. You know how Carey talks? It's like that. And Jay and Scott are a lot harder to understand. And they go 'naa naa naa'. And they go 'Heea' (M increases her volume here), like that. It's hard to understand.

It was stated above that Mrs. Brooks agreed that students limited their discussion of certain types of information regarding hearing impairment. An excerpt from the interview also provides an effective introduction to the following section, which contains a discussion of the benefits of student socialization.

Researcher: Do they talk much about the cause of their hearing impairment?

Mrs. Brooks: Well, no, not much. Not unless it's specifically brought up. They're pretty cool about it. They think of themselves as average teenagers in a middle school. And that's what they are, I guess. I hope, anyway.

#### Benefits of Normalized Socialization

Maintaining a context in which the disquietudes of hearing impairment were disregarded required considerable effort on the part of all members. This environment was

not an end in itself, however, but a means of providing students with a context in which they could act freely and comfortably to accomplish a rich variety of personal and social objectives. These exchanges allowed students to meet diverse immediate needs: to gain functional information about academic work and the school at large, to satisfy curiosity, to promote self-esteem, and so on. Over time, the frequent routine associations allowed members to cultivate a sense of identity and affiliation with the group, and to form close and enduring friendships.

Students asked for and provided information about class activities, school events, and issues in wider contexts. Most of these were brief and simple question-answer exchanges about academic work: word meanings, homework assignments, and activities in other classes. Students shared information about school-wide issues, including student government, book sales, athletics, and special team events. Information was exchanged about meanings of popular terms (T.G.I.F., Teenage Mutant Ninja Turtles, and pop-tarts, as examples). Occasionally students discussed state, national, and international topics, including sports, popular television shows, and televised news items.

Students exchanged a variety of teases and insults. Many of these were simple and quickly executed, but some were quite elaborate and clever. In this example, Jay and Robin were working a set of math problems at the board, and

Jay took advantage of Robin's momentary lapse of vigilance to begin working an easier problem originally assigned to her. The entire exchange was conducted in sign only:

Robin: 'You stole my problem!'

Jay: 'Fine. You do all {of them}. (Pause.)  
You{'re} stupid.'

Robin: 'You {knew it was} my problem.'

Jay: 'Your problem {is} bad breath.'

Robin: 'My math problem!'

Despite the seeming acrimony in the exchange between Jay and Robin, most of the insults accompanied feelings that were episodic and short-lived. Recipients of insulting comments generally deflected them, either by signaling exasperation or by returning an insult in kind. Resolution of these ruptures in harmony was not actively undertaken; rather, they were most often followed by interludes of sullenness until the heightened emotions had subsided. Teases took a variety of forms, but were generally contrived to embarrass the recipient good-naturedly. In this example, Kate and Brent were writing sample sentences in the active and passive voice during an activity in Ms. Franklin's classroom:

Brent (pretending to write on his worksheet):  
'Jay likes Kate.'

Kate: 'That's all right. It doesn't say I  
like Jay.'

Brent (still pretending to write): '...and  
Kate like Jay. They went out to eat. And they  
kiss.'

Students frequently made attempts to regulate the actions of others. These included desists issued to stop others from talking or making unusual noises or distracting

movements, calls for participation in activities or academic work, directions to change location, and urges to hurry. Most regulatory comments resulted in rather immediate compliance with the direction or request, but some required repetition to achieve compliance. Comparatively few directives were ignored or rebuffed.

Occasionally students disclosed personal and sometimes sensitive information, both in close conversations and in the open group. These topics included parents' ages, negative feelings toward parents, parents' actions that were potentially embarrassing, and one informant's sister's pregnancy. Less sensitive topics included narrations of recent events at home, special family events, and family traditions.

Topics in hygiene and physical development were popular among students, and were pursued primarily in close conversations. Students discussed frequency of toothbrushing and bathing, acne, freckles, physical stature, foot size, and breast development. In some of these conversations, students discussed perceived relationships between genetics and physical characteristics.

Students also shared values. They discussed the importance of keeping promises, expressing gratitude, keeping contract-like commitments, and refraining from aggressive behavior. Discussions of such issues were usually brief, typically occurring when certain events



arose in the immediate context. On a number of occasions when students made promises, negotiated loans with others, or made threats, other students intruded with brief didactic statements. Students also discussed values relating to less immediate issues, honesty, young motherhood, hunting, and caring for animals, as examples. Typically, participants in these discussions held differing values; the conversations were more extensive, and were conducted in greater privacy.

Students frequently engaged in interactions that were obviously contrived to promote an individual's self-esteem. Most commonly, students touted their recent academic achievements and successes they had in sports, games, and other competitions. Warren explained with pride the results of several hunting trips and a number of episodes of overindulgence in eating pizza. Jay told of R-rated movies he had watched, of mischief he had perpetrated with success, and of outsmarting his older sister. Kate narrated several instances of flying in a private plane with her father. Brent and Scott boasted of their skating prowess. Marcie often explained with thinly concealed delight her successes on tests for which she had not studied. Robin described touching a rattlesnake (one that had undergone taxidermy). All the males in the group sustained minor injuries during the year of the study, mostly during athletic contests. Without fail, they displayed their

injuries frequently, enjoying the attention they received from others, chiefly the males.

Exchanges of this nature may seem quite ordinary, and indeed they were. The point is that as members of this group, these students could engage in the routine exchanges common in the everyday lives of other, nonhandicapped early adolescents. That the hearing impaired students were hesitant to interact with their hearing peers, and that they sometimes experienced difficulties in doing so, in no way obviated their need to conduct ordinary affairs of living, prominent among which were deep and meaningful social exchanges.

The consequences of many types of these exchanges offered immediate personal benefits to the students. The cumulative effects of their close association were also critically important. Over time, students acquired a camaraderie and a sense of identity with the group. This feature of group membership was apparent in a number of ways.

Routine and special events in school also required that the students engage in a number of cooperative activities. A rather simple form of cooperation entailed voluntary exchanges in which hard of hearing students interpreted environmental information (the bell chiming, as an example) for deaf students. Students also cooperated in teaching games to each other. These included traditional

card and board games as well as games devised and played by Edison students outside the group. More elaborate forms of cooperation involved students' negotiating with adults for social benefits such as free time (these efforts rarely succeeded) and changes in test dates.

Students in Mrs. Brooks' class regularly participated in an annual variety show that featured student talent from all the classes for the hearing impaired in Charlesberg. This year, the class designed a dance routine for a popular song. As they danced, they signed the lyrics. Participation required not only the efforts of rehearsing; in their performance, students displayed openly and in public their identification with the group. The event was attended by approximately 150 persons, mostly students, their relatives, teachers, and school administrators. The spectators also included four young people who had previously been students in Charlesberg classes for the hearing impaired. One of these had transferred to the state residential school for the deaf, and the other three had recently graduated from Creekside High School. Although explanation of their sense of affiliation is beyond the scope of this study, the young people's attendance indicated the strength of the affiliation that developed among hearing impaired students during their schooling.

Another important benefit of group membership was the opportunity to form intimate friendships. Analysis of

observation data early in the study revealed that students had formed these distinct friendship pairs: Brent and Warren, Kate and Robin, Alicia and Leslie, and Jay and Scott. While Carey was being assimilated into the group, she associated rather closely with Leslie at times when the sixth and seventh graders were separated. When Marcie arrived later, she and Carey eventually formed a pair. As Tony was being assimilated, he and Scott formed a temporary pair, dissociating Jay from his previous close association with Scott. Eventually Jay reentered this group and the three associated as a trio.

It was apparent that these close friendships were valuable to the students. Close friends exchanged more general information and disclosed more personal information than they did with other members. They also made fewer attempts to regulate their close friends' activity and issued fewer insults to them.

Further evidence of the importance of membership in forming close friendships was obtained from interviews. Informants were asked to name persons they considered to be their closest friends among all their acquaintances. Each informant included at least one other member of the group in this category. In all, informants named other members a total of 22 times as being among their closest friends. By contrast, informants included a total of only four hearing students at Edison in this category.

Perceptions of difficulties in communication with hearing people and the associated risks of embarrassment varied across members of the group, but all of them associated some level of discomfort with these perceptions. The presence of other members in integrated contexts allowed students to engage in a variety of successful and meaningful social interactions, even if such discourse meant displaying their differences to hearing students. Thus, the context of normality maintained in physically segregated environments could be extended into integrated contexts. Observation data and student comments in interviews indicated that most students did not communicate frequently with hearing peers in integrated contexts at Edison. When they did, most exchanges were brief and perfunctory, and limited to topics in the immediate physical environment. Still, the presence of other members seemed to provide students with a measure of confidence that allowed them to make brief social excursions from their group and engage in some interactions with their hearing schoolmates.

#### Summary of Student Socialization.

Student members of this group perceived that they were different from their hearing schoolmates because of certain facts of hearing impairment. These differences occasionally intruded upon the students' everyday life, causing a variety of mild discomforts. When student members were together, they collaborated to produce a context in which

hearing impairment was a normal condition. To accomplish this, students minimized or eliminated the perceived differences by accepting and even requiring certain actions necessary to effect smooth, unhalting communication.

Sustaining a social context in which hearing impairment was a normal condition also required students to submerge selected facts of hearing impairment by restricting their appearance as topics in conversation.

The benefits that accrued to students as a result of their efforts are understated by characterizing their enterprise as merely one of achieving a temporary haven of normality, however. In their protected context, students clowned, teased, and disclosed personal and sometimes sensitive information. They discussed questions of physical development, personal anxieties, and even international political issues. They laughed often, and openly expressed their frustrations and vexations. They enjoyed a camaraderie and formed fast friendships. They cooperated and competed in academic endeavors and worked together to achieve both group and individual goals. In short, by collectively disregarding the effects of hearing impairment, members could confront in themselves and others the joys, challenges, enigmas, and fears of being early adolescents.

### Characteristics of Adult Members' Participation

Adult members' contributions to maintaining a normal context included many of the categories of student participation. The three adult members of the group, Mrs. Brooks, Mrs. Elliott, and Mr. Wood, could sign fluently. These adults knew students' communicative abilities and needs, and they selected and shifted modes as smoothly as students did. The adults also provided abundant opportunities for students to develop close social relationships with concerned, congenial adults. In addition, these adult members made unique contributions that fell into two broad categories, counteracting additional difficulties with communication and promoting academic success.

### Counteracting additional communication difficulties

The adult members perceived that students had difficulty comprehending certain types of reading materials efficiently. Very frequently, they assisted students individually and in small groups by simultaneously reading aloud and signing directions for academic activities, short passages in reading texts, word problems in math, and so on. These episodes often included coaching students on definitions of new terms and on the overall content of the material. Such assistance was sometimes requested by students, but as often as not, it was provided without solicitation as the adult moved about the classroom monitoring students' work.

The manner in which adults provided this assistance was also supportive. In most cases, the adult structured the assistance so that it was rendered as privately as practicable by moving to the students and either sitting beside them or standing close by.

Researcher: I noticed that when a kid had a question, you'd move from wherever you were in the room to the student. If you were at your desk and a student at the round table raised his hand, you'd go over to him to answer the question or whatever. Is there a reason why you do this?

Mrs. Brooks (laughs a little, then): I don't know. I'm sure I do it differently on different days. Maybe it's something personal. If a kid says "I'm stuck," yeah, I'll go over. Maybe it's that I don't want to disturb the other kids. Or maybe the kid is embarrassed about the question, about not knowing. Maybe it's just to give some extra attention.

Adults also monitored students' communication form and offered corrections. Most often, this assistance involved intervention to correct a student's mispronunciations. In these cases, the adult generally waited for an opportune moment to enter a student's conversation or recitation, then called the student's attention to the mispronounced word, provided a model pronunciation, and requested that the student imitate the model. Occasionally a student, typically a newcomer, used a sign improperly; here, the adult modeled the appropriate sign and requested that the student use it.

On several occasions, Mrs. Brooks assisted students in communicating with their parents. These instances usually



occurred when students had not supplied parents with complete or accurate information about school events or had difficulty expressing their personal concerns. In most cases, these miscommunications were cleared up over the telephone; at times, Mrs. Brooks also met directly with parents after school.

#### Promoting academic success

Mrs. Brooks' perceptions of the liabilities accompanying hearing impairment figured prominently in this category of adult contributions. First, she and the other adults worked to ensure that students' hearing impairment would not hinder their achievement in mainstream classes. She perceived that some students were capable of satisfactory achievement in certain regular academic classes and others were not. Her forecasts of student achievement figured in her selecting them for mainstreaming. If students could achieve adequately with the assistance necessary to overcome the communicative effects of hearing impairment, they could continue attending mainstream classes.

Researcher: Can you tell me how you select students for mainstreaming?

Mrs. Brooks: I select them on the basis of their skill levels. I usually try to start mainstreaming kids in the sixth grade. If they have trouble, we rebuild their schedule and bring them back in.

Researcher: What do you use for skill level?

Mr. Brooks: Their reading level, from tests, etc. If they're reading at the fourth- or fifth-grade level, they can handle mainstreaming with an interpreter.

Mrs. Brooks recommended teachers for mainstream classes according to related criteria:

Mrs. Brooks: I try to keep the kids in the first hallway (the hall closest to Mrs. Brooks' classroom) unless teachers on the first hallway resist mainstreaming, or there's a schedule conflict, or I know a teacher is difficult to lipread.

She also monitored students' performance in their mainstream classes by conferring with their teachers, with Mr. Wood, and with the students themselves. Mr. Wood and Mrs. Elliott tutored students in assignments from those classes. These actions operated to extend the normality of hearing impairment, albeit in necessarily limited ways, into the context of mainstream classes. That is, the effects of hearing impairment were not allowed to interfere with a student's achievement. If a student did not succeed, it had to be for other, more normal reasons:

Mrs. Brooks: Some teachers say, "I feel sorry for them." I say, "Did he earn an F?" Especially if he deserves it, if he's been loafing, not doing the work, he does. These are normal teenagers. If one decides to check out because he's flirting with a girl, then he deserves the F.... I'm thinking of one teacher in particular. I had to say, "Don't feel sorry for the kids. They have to compete with hearing kids because that's why they're here." They don't get mainstreamed if they can't handle it. The worst thing to do is to feel sorry for them if they're lazy.

#### Social Processes and Ends Within the Group

The students' collective efforts to maintain a social context in which hearing impairment was a normal condition produced, in Berger and Luckman's (1967) terms, a partial

reality. That is, in the shared perceptions of hearing impairment, the sanctioned topics of conversation, the acceptance and use of specialized communicative actions necessary for the group to function as it did, members created a social reality distinct from the reality that they experienced in contexts beyond the school. If it is to be demonstrated that the process of secondary socialization was indeed taking place, it is also necessary here to confirm that the six features of secondary socialization, in Berger and Luckman's (1967) terms, were operating in some measure within the students' social interactions. Elements were found that can be subsumed under the six categories. Many of these phenomena have already been addressed in the discussion of the cultural theme; these and additional features of the students' interactions will now be explained in terms of Berger and Luckman's (1967) six categories of secondary socialization.

#### Norm-Governed Roles

A number of roles appeared to be operating within the group. Some of these were incidental to the creation and maintenance of the partial reality; consequently, these were not central to the study and will not be addressed here. Three unique roles important to the group were detected. Because the status of group members influenced the roles in some measure, the social stratification of the membership will be presented first.

Social status of members

Members' status was assessed by analysis of these categories of observation and interview data: types of regulatory statements issued and the quality of compliance that resulted, acts and terms of respect accorded by members to others, and the nature and extent of active participation within the group. The clearest lines of demarcation stratified members into three groups: adults, older students, and sixth graders. Predictably, Mrs. Brooks held preeminence in the entire group; Mr. Wood was second, and Mrs. Elliott, a close third. Among students, status accrued from both personal and institutional sources. Eighth and seventh graders held higher status than sixth graders. Adults gave them more responsibilities, asked them to run more errands, and held them to greater expectations. Sixth graders regarded them with esteem and regularly complied with their directives. In this group of four older students, Kate was obviously dominant; Alicia, Brent, and Warren held approximately equivalent status. The group of sixth graders was also stratified. Jay, Leslie, and Robin were dominant within this group; Carey, Scott, and Tony occupied secondary status here; and Marcie held the lowest position. Although the influence exerted by students was discernable, it is important to note here that the delineation between students was slight. Dominant students could issue certain kinds of regulatory statements

and receive compliance, but the group accorded a narrow range of authority to student members. Bossiness was negatively sanctioned, and students disapproved of those who stepped beyond certain bounds in attempting to assert their will over others.

#### Partner in discourse

The roles assumed most frequently were associated with communication within the group. All members, students and adults, regularly participated as communication partners and in so doing, engaged in norm-governed behaviors. Recall that there were approved procedures for getting attention and that some of these were related to members' status. Members were obligated to learn sign and to approve its use. Acting as a partner in discourse also required the member to select a viable mode before beginning to converse, and to make a smooth shift to a more accessible mode if communication in the initial mode failed. Partners also tacitly agreed to avoid certain sensitive topics relating to hearing impairment.

#### Roles assumed in interpreted discourse

The four roles entailed in interpreting have been discussed previously. Recall that the speaker was obligated to regulate the speed and clarity of the message, the interpreter was expected to serve on demand and to reproduce the message in good time, the listener or receiver was obligated to attend, and bystanders were prohibited from

interfering with the exchange. The routine conduct in interpreting transactions and the regulatory statements issued when any member erred from sanctioned conduct indicated that these roles were governed by distinct norms.

Members' status also figured importantly in interpreting transactions. Mr. Wood interpreted most frequently and was the only member whose position was labeled with the term interpreter. Members recognized his close association with the role and seemed to identify his level of status, in some measure, with other members who assumed the role. That is, there were times when members underwent a discernable shift in status by assuming the role of interpreter. For Mrs. Brooks, this status shift occasionally produced some slight discomfort because her taking the role of interpreter lowered her status somewhat and allowed students to issue regulatory comments to her that were otherwise disallowed. There were times when students assumed the role of interpreter. In some of these cases, the status of the student interpreter was elevated to an extent uncomfortable for students in the role of receiver. That is, the student interpreter was accorded a degree of authority that the receiver perceived as excessive, and these students issued messages tinged with resentment to the interpreter. The role of receiver was associated with comparatively lowered status in some other situations. When the group went on a field trip to a local zoo, Mrs.

Brooks interpreted as their tour guide spoke. The tour guide encouraged the students to ask questions, and gave them permission to call her by her given name. Hard of hearing students were thus released from some of the formal constraints governing student interactions with adults: They addressed vocal questions directly to the guide, calling her by name. Students in the role of receiver were still obligated to raise their hands to call for Mrs. Brooks' attention, and they had to pose their questions to Mrs. Brooks.

The final role associated with the group was that of importer. Students shared information of all kinds, and all students participated in these exchanges. Certain types of information was deemed especially valuable to the group because it informed members about important events and activities within the wider school context. This included explanations of rules for games that hearing students had devised and played before and during school, knowledge of school politics, and information about individual hearing students whom members encountered in some of their mainstream classes. Kate most often made contributions of this type. By virtue of her longer experience at Edison, the number of mainstream classes she attended, and her congenial personality, she was able to gather and import more of such information into the group.

The second type of valuable knowledge was information about and explanations of phenomena associated with the wider culture that were important to the other students at Edison. Topics here included popular singers and groups, words to popular songs, dance steps, and popular television shows and performers. Kate, Alicia, Jay, Leslie, and Robin made the most frequent contributions in this category.

Students who gathered and shared this kind of information were not merely satisfying others' curiosity; they were assisting them in functioning within the larger society of the school. Of course, this information was otherwise potentially available to members, but having another member as a source made the information much more easily accessible. Importers provided the information openly and casually; the obvious interest other students took in it indicated the value they placed on such knowledge. These exchanges also enhanced the status of the importer in some measure.

#### Significant Others Within the Group

Full participation in the group carried the obvious benefits of companionship and the opportunity to form close friendships. Members of the group at the beginning of the year of the study had enjoyed longtime friendships and camaraderie, having attended school together for at least one year previously. Some had been associated since their early elementary grades at Whitney, but the affective bonds



among them were not discernibly stronger than those among students who had entered the group later. The allure of this affective component of membership served not only to assist in maintaining the reality of the group for established members, it also contributed to the incentive for newcomers to aspire to full membership.

The relationship between the affective attractions of group membership and the maintenance of the social reality of the group has been suggested previously. Within the group, close friendships and casual companionship both required that members adopt the principles of communication sanctioned by the group and act competently in specialized communicative exchanges. When Carey, Marcie, and Tony entered the group as newcomers, the benefits of being accepted by established members were obvious to them. They also found that in order to enjoy closer association with established members, they would be required to make a commitment to the partial reality maintained within the group. (The process of inducting new members is discussed below.) The critical issue here is that members were significant to each other, and the affective character and strength of their affiliation served to promote compliance with the communicative rigors entailed in group membership.

Specialized Vocabulary

A third element of secondary socialization is the use of a specialized vocabulary to interpret and legitimate

conduct within the secondary social context. Specialized terms that members used most frequently to explain their distinct activities, call for and regulate participation in unique group activities, and differentiate members from nonmembers have been discussed at length previously.

Recall that the terms hearing impaired, deaf, sign, finger-spell, interpret, lipread, hearing aid, and mainstream were critical for socialization within the group. Other specialized terms also appeared, though they were used less often.

Four additional terms, eye, hand, voice, and caption took on added meanings denoting their importance in specialized communication. Visual attention was often necessary for complete and successful communication; the absence of eye contact could signal a break in one's participation in discourse. Conventional signed conversation is impossible without vision (in fact, the signs for attend and pay attention originate at the eyes), and lipreading also requires close visual attention. In utilizing the signs for attention and in calling for others' attention with such vocal phrases as "Give me your eyes", members were including the term eye in their specialized lexicon. The hands are indispensable to signing, and members occasionally used the term hand to refer to aspects of communication. The term voice was used as a verb to denote vocal interpreting, that is, when an interpreter spoke as a

member signed. Finally, the term caption was used to denote television programs and videotaped movies that had been close-captioned for the hearing impaired.

Students not only differentiated among members of the group by using the terms deaf and hearing impaired, they also distinguished between themselves and the other students at Edison. Two terms were used interchangeably here, hearing kids and regular kids. These terms were rarely used in exchanges observed in the group, but students made frequent use of them in interviews. Another infrequently used term associated with distinguishing members from non-members was the phrase small bus. Most members of the group rode in the special, shorter school buses and realized the common association of the appearance of the vehicle with some handicapping condition. Finally, certain locative terms took on specialized meanings for members of the group. Mrs. Brooks' classroom was the recognized nucleus of group activity and the site of obligatory full participation in group socialization. Students occasionally referred to their mainstream classes as being out there, and to Mrs. Brooks' classroom as back there or back here.

#### Apparatus for Maintaining the Secondary Reality

The fourth characteristic of secondary socialization is the obligatory use of linguistic legitimations (verbal explanations or justifications for sanctioned behaviors)

and the optional use of ritual or material symbols to signify features of the secondary reality. Members' references to the group or to special requirements for membership, and statements explaining approved behavior or directing members to engage in such activity were included here. As mentioned previously, some of the terms associated with the group were used infrequently by members; others were used more casually and frequently. Nonetheless, some items in the special lexicon appeared regularly in discourse within the group. The mention of a term denoting one of the concomitants of hearing impairment served as a verbal reminder of the existence of the group and of students' participation as members within it. The occasional directives for compliance with norms were more powerful legitimations; these not only included references to the group, but were also clear specifications of the actions necessary for membership.

Besides these regular and somewhat routine legitimations, other more commanding legitimations appeared, albeit less frequently. On one occasion, Mrs. Brooks found it necessary to admonish students for signing out of turn in their mainstream classes. In the discussion that followed, all participants were actively engaged in legitimating certain knowledge and communicative behaviors unique to the group:

Mrs. Brooks: 'I heard about some stuff that's going on in mainstream classes. When teachers

say, "No talking", maybe a couple of people start signing. Is that all right?' (Here, several students utter 'No'; among them are Kate and Robin.)

Kate: 'It's still talking. Communicating. We're supposed to be working. It's not fair to others.'

Robin: 'We're not special.'

Mrs. Brooks: 'You should know it's still the same. It's not fair. For us, talking is signing. Other kids get curious and start looking at us and not paying attention to their teacher.'

Here, members acknowledged signing to be a specialized form of communication; they disclosed the differences members perceived between themselves and hearing students; and they discussed explicitly the specialized use of signing to conduct private conversations openly in the presence of nonsigners.

The variety show put on by all the classes for hearing impaired students in Charlesberg also provided specific examples of legitimations and of material symbols associated with the secondary reality. First, students openly displayed the concomitants of hearing impairment in a public event: They signed, they revealed their distinctive speech, and they displayed their hearing aids. In so doing, they made public disclosure of their individual hearing impairment and their identification with the group. Second, the use of sign was legitimated. Students from various classes read prepared introductions before each song or skit:

Jay and Tony introduce Act 4. Tony reads aloud, voice only; Jay signs from the same

sheet: 'There are 3,000,000 deaf people in the U.S. American Sign Language is the third most popular language in the U.S. The next act is a square dance to the tune, "Old Dan Tucker"'.

Third, members openly discussed their evaluations of the interpreters who served at the event. Finally, material symbols associated with the secondary reality were displayed prominently: The curtain used as a backdrop was decorated with 30 hands cut from colored construction paper.

No ritual symbols were adopted into regular use within the group. The hearing aid served as a material symbol of hearing impairment and consequently, of its user's association with the group.

#### Means of Socializing New Members

The fifth characteristic of secondary socialization is the use of some means of socializing new members. Three new students entered the group during the year of the study. Conditions surrounding their arrival, the subsequent activities involved in their induction to fuller membership, and the information they disclosed in interviews contributed valuable data regarding the means used within the group to socialize new members. Interviews with established members also provided insights into these procedures.

There was no formal role associated with the socialization of newcomers. Teaching new students the requisites

for participation was done informally by virtually all members. Some of the information was transmitted through direct instruction, but newcomers also had to acquire a good deal of the necessary knowledge and skills by imitative learning and by trial and error:

Researcher: You knew some sign before you came here? A little bit, you say?

Tony: A little bit.

Researcher: I think I noticed that when you first got here, you didn't sign very much. Right? (Yes) When you first got here. But you sign pretty much now.

Tony: But I didn't sign much.

Researcher: You didn't sign much then. Did you learn any signs here? (Yes) How did you do that?

Tony: I just watch the teacher. And watch the kids.

The induction process included three phases, characterized here with the terms initial entry, period of rejection, and assimilation into membership. Although their induction differed in some details, all three of the students who entered the group during the year of the study passed through all three phases.

#### Initial entry

This phase was a bright period for the new students and established members alike. Shortly before their arrival, Mrs. Brooks announced their impending entry. She informed the group of the newcomer's name, age, grade, and any personal characteristics she had learned. The established members welcomed this information with interest and some excitement.

On the day of his or her arrival, the new student was showered with attention. At every opportunity, old members excitedly asked questions of the newcomer concerning his or her background, former school, past and current residence, family status, and so on. They also disclosed certain types of personal information to the new students. This was one of the few situations in which members spoke explicitly about their degree of hearing acuity. They described their own hearing ability, explained and demonstrated other members' hearing acuity, and asked questions about the newcomer's hearing. They also made communication norms explicit, especially those governing the need to sign for deaf students. The following is an excerpt from the observation made on Carey's first day at Edison. Here, Leslie demonstrated Scott's level of hearing for Carey:

Leslie calls to Scott, who is at table 2 with Warren; Scott's back is to Leslie. After Leslie calls loudly, she approaches Scott, taps his shoulder, and says loudly: 'Did you hear me call?'

Scott looks at her with apparent surprise, checks his hearing aid, then shakes his head.

Established members also provided some basic instruction necessary for the newcomer to participate as an Edison student. Mrs. Brooks assigned other sixth graders to serve as guides and lead new students to their first few days of classes. Students explained the basic systems by which they earned points for free time and accumulated certain kinds of academic credit.



Also during this phase, in the newcomer's absence, old members discussed their attributes. The most notable topics here were their physical appearance and sign and speech quality. This was often carried out by making comparisons between the newcomer and a previous or current member of the group. These discussions served as precursory measurements of the newcomers' suitability for membership.

In the few days following the new student's arrival, adult and student members extended them a variety of courtesies. Mrs. Brooks showed them some preferential treatment: She made allowances for minor infractions of her rules, provided them with extra opportunities to participate in class discussions, and issued praise more frequently for both academic and nonacademic accomplishments. Students continued to assist newcomers in learning basic skills for participating in the group and in the school at large.

#### Period of rejection

This dark phase began within a week of the newcomer's arrival and lasted in its most severe form for approximately a month. It was carried out almost exclusively by the student members. They withheld the attention that they had recently lavished on the newcomers. They actively and passively rebuffed newcomers' attempts to join their activities and to participate in conversations. They tattled on

new students, mocked them, and issued put-downs, scatological insults, taunts, and graphic but hollow threats. Members also directed newcomers to conform with the approved behaviors associated with membership, but these directives were curt and carried no explanations.

The new students were ambivalent in the types of responses they returned for the rejection. They occasionally returned insults, tattled, and refrained from complying with norms. (The conventional form of reciting the Pledge of Allegiance was a practice that both Marcie and Tony were reluctant to relinquish. Rather than recite the Pledge with hands over hearts, members signed as they recited. Marcie and Tony persisted in the traditional form of recitation for some weeks after their arrival.) They also persisted in their attempts to be included in the exchanges enjoyed by members.

Now in the absence of newcomers, members discussed the characteristics they perceived to be interfering with the newcomers' suitability for inclusion in the group. These included the qualities of their communicative competence as well as personal attributes unrelated to norm-governed activity.

#### Assimilation into membership

Early in this phase, both members and newcomers initiated conciliatory actions. The use of verbal abuse subsided on both sides. Newcomers began engaging in the

required communicative behaviors. Members included newcomers in their activities and conversations, tenuously at first, and then with greater degrees of access and participation. In these exchanges, newcomers occasionally offered tributes to members, complimenting them and even presenting them with small and inexpensive gifts. Members continued to issue directives for compliance with norms, but these messages were no longer harsh, and they were accompanied by explanations when necessary. Newcomers now readily complied with these directives. The associations between newcomers and established students gradually increased in number and quality; eventually, each of the three newcomers had entered into a close friendship with one of the others. It may seem contradictory that Carey and Marcie ultimately formed a close friendship. Well before Marcie arrived, Carey's assimilation was virtually complete, and she had formed a close relationship with Leslie. As Marcie was being assimilated, she entered this friendship group, and Leslie later diminished her close association with the pair.

Completion of the assimilation phase was marked by the newly inducted members' social competence and commitment to the group. Marcie and Tony had learned to sign adequately, and Carey had acquired some local signs and altered some of hers that were foreign to the group. All three acquired the specialized lexicon. They were able to assess other

members' communicative competence accurately; that is, their judgments were generally comparable to those of established members. One prominent indication of the new members' commitment to the group was their participation in the variety show. All three expended the effort to rehearse for and take part in the production, which, as suggested earlier, required that participants disclose explicitly and publicly their identification with the group.

#### Routines and Tacit Understandings

The final characteristic of secondary socialization is that routines and tacit understandings operate to maintain the reality of everyday life within the social context. Besides the routines of participating in discourse within the group, discussed above, there were other more or less formal routines that supported the secondary reality. At the beginning of each school day, and before the first class was formally in session, all members engaged in informal routines that marked their identity with the group and required them to assume norm-governed roles. Students who rode a bus to and from school rode a small bus. For members who rode in the company of other members, conversations on the bus required that they assume the role of partner in discourse. For members who had no hearing impaired relatives, this also signified their transition from a social context of the hearing to one of the hearing

impaired. Members who arrived at school individually also interacted with other members in activities before school; these were similar routines of transition.

The first formal activity of the school day was the recitation of the Pledge of Allegiance. In reciting the Pledge, members had to abandon the traditional patriotic stance, because signing precluded holding one's hand over one's heart. Besides relinquishing conventional practice, members were engaged in a daily ritual of signing in chorus. Immediately after the Pledge, Mr. Wood began interpreting the intercom announcements and members attended to him. This marked the beginning of another day in which most members would later assume the role of receiver in interpreting transactions. Finally, regardless of the extent of their mainstreaming, all students returned to Mrs. Brooks' classroom periodically during the day. Because the classroom itself was the primary locus of obligatory full participation in the group's activities, the routines of returning there served as intermittent reminders of students' affiliation with the group.

Certain of the social activities that occurred within the group in routine conduct and in special events can be organized into categories that correspond to Berger and Luckman's (1967) six features of secondary socialization. Some of these processes operated individually, and others in concert, to produce a partial reality within the group

that was distinct from the reality members experienced beyond the group.

#### Students' Perceptions of the Middle School

One particular area of interest to the researcher was the students' perceptions of the recommended middle school practices that were in operation at Edison. Some of the data important to this aspect of the study were readily observable in students' routine activities at school. Certain topics were investigated further in interviews. Analysis of these data indicated that the students recognized and valued the prominent benefits of the middle school that were available at Edison. Two major categories appeared here: the advisor-advisee group and interdisciplinary team membership. Students also found some additional but less prominent features to be valuable, as well. Students perceived the features of their own group to be more salient and valuable, however.

#### Perceptions of the Advisor-Advisee Group

The AA (advisor-advisee) group concept is a long-established element in middle school practice. Its purposes include developing meaningful relationships between students and teachers and among students themselves, and providing opportunities to explore themes related to early adolescence, school-wide concerns, and social responsibility. Mrs. Brooks' AA group consisted only of the 11 hearing impaired students; the group was uncommonly small

in comparison to the regular AA groups. As suggested above, the social relationships between the adults and students and among the students themselves were particularly close and valuable.

The AA period took up the first 25 minutes of each school day. During this time, students participated in one of three regularly scheduled activities. The first two were rather routine. DEAR (Drop Everything and Read) was scheduled on Mondays, and students and adults alike engaged in recreational reading. Students read from a variety of materials, including newspapers, magazines, paperback juvenile novels, and even textbooks. The intensity of their concentration as they read and the nature of the conversations about their reading suggested that they prized this activity highly. On Tuesdays and Wednesdays, students engaged in RATS (Raising Achievement Test Scores) activities. These involved direct instruction in specific reading and math skills, rehearsal of the skills, and taking practice tests. Predictably, students' enjoyed DEAR conspicuously more than RATS.

On Thursdays and Fridays, affective activities were scheduled for the AA period. Often during these periods, Mrs. Brooks conducted group discussions of special topics. These included developmental issues in early adolescence, academic concerns, and difficulties that arose in the school and within the group. Sample topics here were the

characteristics of friendship and peer pressure, attitudes and skills related to learning, means of dealing with anger constructively, fighting in school and ways students could help reduce it, and students' signing out of turn in their mainstream classes. Even when topics were uncomfortable for students, most of them engaged in the discussion actively and with apparent interest. Mrs. Brooks encouraged reluctant students to participate in these discussions, as well. In interviews, informants reported that they found these activities to be quite important.

The AA period also provided time needed to conduct student business. Students participated in a variety of school-wide projects such as student government elections, a campaign to collect grocery store receipts to exchange for school computers, a canned food drive, and an activity to raise contributions for the Salvation Army. Occasionally, team events such as intramurals and organizational meetings for team fund raisers took place during AA. Activities related specifically to the group were also conducted. Mrs. Brooks discussed group field trips and special events, distributed permission and information sheets for parents, and collected fees involved with these events. Periodically, students' hearing aid use was monitored and the instruments were checked during AA. Occasionally short parties for birthdays and other special events were held. There were also abundant opportunities



for students to interact casually, if briefly, with each other and with the adults in the group. Students took an interest in and enjoyed all these activities, of course. A less apparent feature entailed in these events also carried some discernable importance. The mingling of personal, group, team, and school-wide concerns in the routine AA context assisted in some measure to develop students' awareness of the social interrelationships that operated at Edison.

#### Perceptions of Interdisciplinary Teams

The primary purpose of the interdisciplinary team concept in middle school practice is to provide early adolescents with frequent opportunities to engage in social interactions within a familiar group of manageable size. For the hearing impaired students, the process of developing an understanding and appreciation of the interdisciplinary team appeared to be gradual; that is, seventh and eighth graders were more capable of explaining the nature and purposes of the teams, and they valued team membership more than the sixth graders.

At some time during the year, all the students participated in and enjoyed special team activities. They participated in fund-raising events that supported special team recreational activities and field trips. They worked to meet other requisites for joining in the activities: earning and keeping points awarded for appropriate behavior

and achieving the required academic marks. Students also participated in the more routine team activities, chiefly intramurals and organizational meetings. For their regular academic classes, they were usually assigned to mainstream teachers on their teams. Although all the informants perceived that team membership offered certain advantages, the seventh and eighth graders seemed to have a larger sense of the purposes and benefits of the teams. Sixth graders regarded the teams more superficially, and more as just another source of special activities that arose within the incomprehensible context of the wider school.

Researcher: Which team are you on?

Scott, signing: Team?

Researcher: Which team are you on, B or C or P....?

Scott, signing: C.

Researcher: You're on C Team. Can you tell me about that? What does C mean? (Scott shrugs his shoulders twice.) I know that P means panthers.

Scott, signing: C, I think, cats.

Researcher: OK. What do you do with C Team?

Scott: It mean{s} sixth grade{rs}.

Researcher: OK. Do you have games sometimes with C team? (Yes.) What kinds of games?

Scott, signing: Lots. In PE.

Researcher: What team are you on?

Brent: P. Panthers. Yeah, Panthers! Yeah! (Brent raises a fist as he gives mock cheers.)

Researcher: What does the team do?

Brent: Play games together, go swimming together, go to class together. Not all, but some of the classes.

Researcher: Do you know other people on P Team?

Brent: A lot of people on P Team. We eat lunch together sometimes.

Researcher: Do you have lots of friends on P Team? (Yes.) Do you know people on other teams?

Brent: Yeah. (Here Brent names the other five teams by letter and mascot.)

Researcher: Were you on P Team last year?

Brent: Yeah. Next year, I won't. I'll be on B Team.

Researcher: Why do you go to B?

Brent: Eighth graders are B and W. P and H next year will be sixth graders, and next year C and S will be seventh graders.

Brent's comments are representative of those made by the other older students. They perceived the teams as distinct groups within the Edison population, they had some sense of affiliation with the team, and they valued the social encounters (even if they were often superficial) afforded by team membership. Scott's responses were typical of most of the younger informants. Among the sixth graders, Robin had a clearer notion of team membership, but her knowledge was discernibly less than that of the older students.

Besides these middle school practices that entailed direct student participation, one additional feature was important for the group. The esprit de corps among teachers allowed Mrs. Brooks to monitor student performance in their mainstream classes easily and effectively. She could also discuss with those teachers the attitudes that she believed to be detrimental to the hearing impaired students' achievement.

Mrs. Brooks attributed the strong esprit de corps to two factors. First, the esprit de corps was sustained by

the teachers' attitudes toward early adolescents and the middle school philosophy. It was apparent that these attitudes arose from within the strong middle school tradition at Edison:

Researcher: Where do you think this esprit de corps came from?

Mrs. Brooks: Edison is a unique school. I've been here for six years, and it's just part of the make-up of Edison. I don't know why. I can't find the words for it. We always seem to have a very energetic faculty...and we get young, bubbly people who are really into the middle school concept. They're really into the kids, they like the kids.

Second, there were abundant opportunities for teachers to meet, both formally and informally, and to work cooperatively toward common objectives. Teachers on the two teams at each grade level met regularly to coordinate instruction, plan team activities, and assist in solving school-wide problems. Teachers also met regularly, but less formally, at lunch and after school. These frequent interactions and collaborative activities no doubt strengthened the spirit of cooperation among the teachers at Edison.

Aside from the obvious academic benefits to the students, working within this supportive environment enabled Mrs. Brooks to assist them in participating in team activities. The special education teachers, who had students at all grade levels, were randomly assigned to teams so that they were not all on the same one. Mrs. Brooks usually met with the seventh-grade teachers, but she also attended other team meetings when teachers were planning special

activities that would include her sixth- and eighth-grade students.

To varying extents, the hearing impaired students recognized and appreciated certain features of the middle school, and the close association among the teachers at Edison was also important to the group. In the comprehensive analysis of the data from this study, categories pertaining to middle school practice were less prominent than those relating to group membership, however.

## CHAPTER V CONCLUSIONS AND IMPLICATIONS

The purposes of the study presented here were to describe and explain the social processes and cultural themes within a group of hearing impaired early adolescents and to examine the meaning that a middle school context had for these students. Although the social interactions between hearing impaired students and their hearing peers in public schools have been investigated in a number of previous studies, there is little information available concerning the social processes that occur in public schools among hearing impaired students themselves. Prior research regarding the socialization among hearing impaired early adolescents in middle schools is virtually nonexistent. One important reason that this study was undertaken was to contribute new knowledge to the research community, to educational leaders, and to practitioners.

The informants included in the study consisted of 11 hearing impaired students in a public middle school, their teacher, her aide, and the students' interpreter. The middle school selected for the study was one that has been recognized frequently for its application of recommended middle school practices.

Ethnographic research methods were selected because the purposes of the study entailed investigating the social processes occurring within a distinct social group. Because most of the data to be collected and analyzed were linguistic, Spradley's (1979, 1980) Developmental Research Sequence was employed. Fieldwork, consisting of participant observation and interviewing techniques, was conducted over the course of an entire school year. Observations were made in a variety of contexts including the students' special classroom, field trips and other special events, the school bus that some of the students rode, and students' mainstream classes. Interviews were conducted privately under optimum conditions in a small room near the students' home classroom. Observation data were recorded in the form of handwritten field notes; these were later filled in and then typed in the form of protocols. Interview data were recorded on an audio tape recorder and then transcribed.

During the fieldwork period, domain analysis was used to classify data in the protocols; the domains were then examined using taxonomic analysis. Toward the end of the fieldwork period, componential analyses were used to examine certain prominent domains more closely. After data collection was complete, theme analysis was employed to organize the prominent domains into a single overarching cultural theme. Certain categories of data were then

framed and examined in terms of Berger and Luckman's (1967) theory of secondary socialization. Finally, specific categories of data were analyzed to reveal students' perceptions of their public middle school.

### The Cultural Theme

Because analysis of the data resulted in the formation of three broad categories of findings, the specific findings are similarly organized here for discussion. The first of these, the cultural theme, contains eight findings:

1. Students perceived that the physical conditions of hearing impairment, their speech quality and diminished hearing acuity, impeded normal spoken communication with hearing persons.

2. Students perceived that these physical conditions and the instruments and actions (hearing aids and interpreting) necessary to improve the quality of communicative exchanges marked them as being different from their hearing schoolmates.

3. In segregated contexts, students could communicate successfully among themselves by disregarding these perceived differences and using the necessary compensatory instruments and actions (hearing aids and sign).

4. Smooth and successful communication among hearing impaired students occurred when individuals matched the use of communication modes to conditions in the immediate



physical and social environment and to the communicative abilities and needs of others.

5. Social interaction among students was more comfortable if they avoided certain sensitive topics about hearing impairment.

6. Sanctioned application of specialized knowledge and skills allowed students to conduct a variety of routine and necessary social exchanges. These included sharing general knowledge and functional information about school, disclosing personal information, discussing values, regulating the environment, teasing, and promoting self-esteem.

7. Students developed deeply gratifying social relations within the group. They enjoyed a sense of camaraderie and formed close friendships with other members.

8. Adult members of the group also participated in sustaining this social context. They possessed the requisite communication skills and knowledge of students' communicative competence. They assisted students in overcoming certain other communicative difficulties and provided opportunities for students to interact meaningfully and pleasurably with concerned adults.

Explanation of the cultural theme within this group rests on two necessities of human existence that the informants perceived: communication and normality. Students perceived that successful communication was necessary to conduct the routine business of everyday life and to form

and maintain meaningful social relationships. They also perceived that being normal entailed not being different from others in certain ways. The condition of hearing impairment interfered with both of the fundamental human necessities and presented the students with a potentially disturbing dilemma. The physical condition of hearing impairment was inescapable, and it impeded normal communication. Counteracting the physical condition of hearing impairment in order to make communication with hearing persons successful required the utilization of objects and actions (hearing aids and interpreting), but the use of these obvious compensatory means amplified the students' differences.

The opportunity to interact with other hearing impaired students could resolve this dilemma. Because all of the students shared the physical condition of hearing impairment, this condition could be approved within the group. Because all students required the use of assistive devices and actions, these concomitants of hearing impairment could be approved, as well. The fact that there were recognized differences across the students in these primary and secondary features was virtually irrelevant. Students perceived that the demarcation between themselves and their hearing schoolmates was stronger than the differences they could detect in each other's hearing ability and communicative competence. In approving the physical condition of

hearing impairment and in sanctioning the use of assistive devices and actions, students were striving collectively to sustain a social context in which hearing impairment was a normal condition. This social context was, in effect, a version of reality distinct from the reality students experienced outside their group. Important aspects of the social processes that the students employed and the social reality that they produced can be explained in terms of Berger and Luckman's (1967) theory of secondary socialization.

#### Secondary Socialization

The second category of findings relate to Berger and Luckman's (1967) theory of secondary socialization. This theory is included in a broader theoretical consideration of the social construction of reality. A fundamental proposition in this constructivist theory is that primary socialization takes place in the family when children internalize parents' particular version of reality. As the children grow older, they enter some contexts beyond the home and act there not in the company of their parents, but in the company of other persons.

A common example of these contexts is the school. As a newcomer to the context, a child encounters new objects particular to the context. The child finds that unfamiliar activities must be performed in particular ways. Some of the activities that were customarily performed within the

family are unnecessary, and some others are not allowed. By entering into the new context regularly and interacting with experienced individuals there, the child gains deeper knowledge required to get along. Not only does the child learn to name objects correctly and act in approved ways, he or she also internalizes the explanations given for these behaviors and develops a notion of the purposes for which the behaviors are intended. Ultimately, the child may come to think of the new context as a second reality that differs in particular and meaningful ways from his or her primary reality.

If certain social processes occur within such a context, and if a distinct secondary reality is apparent in it, then the processes and product together may be regarded as secondary socialization, in Berger and Luckman's (1967) terms. The six requisite social features are as follows: (a) the operation of norm-governed roles, (b) the presence of individuals who are significant to others in maintaining the secondary reality, (c) the use of a specialized vocabulary, (d) the use of linguistic legitimations and ritual or material symbols in maintaining the reality, (e) a process for socializing new members, and (f) the operation of routines and tacit understandings to maintain the reality of everyday life within the context.

The findings from this study can be organized to correspond with Berger and Luckman's (1967) categories of

secondary socialization. The cultural theme discussed above constituted a partial reality that students maintained in their social interactions. Students acted together to sustain a context in which hearing impairment was a normal condition. In so doing, they were able to meet a variety of personal needs and to develop close and meaningful friendships. The process of sustaining this partial reality included six categories of activity that coincide with Berger and Luckman's (1967) features of secondary socialization:

1. Individual students assumed a number of roles to support the purposes of the group. These included being a partner in discourse, an importer, and four distinct roles required for interpreting transactions. Behavior in these roles was prescribed by identifiable norms.

2. Students acted as significant others for one or more other individuals in the group. The affective character of companionship and close friendship induced the individuals to adopt the requisite practices and commit themselves to the partial reality maintained by the group.

3. A specialized vocabulary was used to interpret and legitimate conduct. Most of the included terms denoted elements of knowledge related to the communicative practices utilized in the group.

4. Secondary socialization in the group was maintained through the use of linguistic legitimations and

material symbols. Members issued explanations for sanctioned behaviors, and hearing aids and other objects symbolized particular aspects of hearing impairment.

5. The group employed consistent means for socializing new members. Each new student proceeded through three distinct phases as he or she was inducted into full membership in the group.

6. Students engaged in particular routines that assisted in maintaining the partial reality of the group. Students also tacitly restricted certain topics of conversation that might interfere with their partial reality.

The fact that the findings from this study can be framed in terms of Berger and Luckman's (1967) theory of secondary socialization is an affirmation of the vitality and authenticity of the informants' social processes and purposes. In addition, the consonance of the findings with the theory lends some measure of strength to the study. That the theory was extended successfully to a social context composed of hearing impaired early adolescents might prove to be of value to other researchers.

#### Perceptions of Middle School

Findings in the third category suggest that certain middle school practices were valuable to the group, and that the informants held favorable attitudes toward them. Students enjoyed most of the activities in AA and recognized the importance of all of them. Students appreciated

the discussions of a variety of personally relevant issues, even if some of the topics were sensitive. Students also gained valuable information about school-wide issues and community concerns. They developed meaningful social interactions with the three adult members of the group.

Students also valued their participation in interdisciplinary team activities. They enjoyed team field trips and other special events, and took part in such regular team activities as intramurals and meetings. There was evidence that the sixth graders knew less about teams and appreciated teams less than the older students. This finding also suggests that students' understanding of and value for team membership increased markedly with experience.

Finally, the esprit de corps among the middle school teachers was valuable to the group in that it allowed their teacher to monitor their academic progress in mainstream classes and enhance their participation in team activities. Their teacher was also able to communicate certain attitudes about teaching hearing impaired students to mainstream teachers.

#### Relationship of the Findings to Previous Research.

A considerable amount of research has been conducted to investigate issues in the social characteristics of hearing impaired students in public schools. Most of these were concerned with the perceptions that hearing students

held toward their hearing impaired schoolmates (Blood & Blood, 1983; Elser, 1959; Glaser, 1979; Ladd et al., 1984; Miller et al., 1978). Several researchers examined the attitudes that hearing impaired students held toward their social experiences in mainstream settings (Foster, 1989; Mertens, 1989; Saur et al., 1986). Antia (1982) and Raimondo and Maxwell (1987) examined specific social skills used by hearing impaired students when they interacted with hearing peers, and the quality and frequency of these social interactions. Antia (1982) also included the interactions of hearing impaired students among themselves in her study. Libbey and Pronovost (1980) investigated the attitudes that hearing impaired students held toward hearing people and the communication modes they reported using. Fleischer (1984) conducted an experimental study to determine the effects of contact and cognitive experiences on ameliorating the negative attitudes that hearing students held toward their hearing impaired schoolmates.

The research methods used in these previous studies included sociometric instruments, structured observations, structured interviews, attitude surveys, and an experimental design. Participant observation and in-depth interviews were also used, but only in studies in which college students and adults were informants.

Three characteristics of the present study figure importantly in relating its findings to those in previous



research. First, the informants were hearing impaired early adolescents who were partially mainstreamed in a public middle school. Second, the focus of this study was centered on the social interactions among hearing impaired students themselves. Third, ethnographic methods, specifically participant observation and in-depth interviewing, were employed. Findings from this study are generally consistent with those in previous research.

The prominent findings from the present study suggest that the informants enjoyed frequent and meaningful social interactions with each other. Similarly, other researchers reported that when hearing impaired students were mainstreamed in the company of other hearing impaired students, they interacted frequently and comfortably with each other and reported more positive attitudes toward their social experiences in school (Foster, 1989; Mertens, 1989; Raimondo & Maxwell, 1987).

Findings from the present study suggest that social interaction with other hearing impaired students was extremely important to the informants. They collaborated to maintain a social context in which they could communicate effectively and comfortably. This sophisticated socialization allowed students to meet a variety of personal and social needs. They exchanged personal and functional information, discussed values, and used communicative exchanges to promote self-esteem. They also developed

a strong sense of affiliation with their group and formed close friendships. Newcomers were willing to devote considerable effort toward acquiring the knowledge and specific skills that enabled them to participate as full members in the group. Along with the previous findings, these findings underscore the need for hearing impaired students in mainstream settings to have abundant opportunities to interact socially with other hearing impaired students.

Findings from previous research concerning the attitudes held by hearing students toward their hearing impaired schoolmates are related to findings from the present study in two ways. First, informants in this study perceived that their hearing schoolmates detected differences produced by hearing impairment, and that at times they devalued these differences. These perceptions figured prominently in the members' perceptions of themselves and of the condition of hearing impairment. Second, previous research suggests that these perceptions may well be based in fact; that is, prior studies indicate that hearing students do indeed hold negative perceptions and attitudes toward hearing impaired students (Blood & Blood, 1983; Elser, 1959; Glaser, 1979; Ladd et al., 1984; Miller et al., 1978).

Two previous studies suggested that the negative attitudes held by hearing students were subject to change

(Fleischer, 1984; Ladd et al., 1984). Fleischer (1984) found that contact and cognitive experiences improved hearing students' attitudes, and Ladd et al. (1984) suggested that the negative attitudes diminished as hearing students interacted with hearing impaired students over time. In both cases, improved attitudes led to improved socialization. Certain findings from the present study are related to these.

The fact that the informants in this study were students in an effective middle school was important to their socialization. Their participation in interdisciplinary teams enabled them to interact with their hearing schoolmates with increasing frequency and comfort. Although the younger students were not as familiar with the nature and benefits of team membership, there was evidence that knowledge and appreciation of teams increased over time. Older students had better comprehension of team membership and appreciated the opportunities to interact within a group of familiar hearing schoolmates, even if those interactions were somewhat superficial.

Findings from the present study locate the informants at Edison between two extremes reported by Mertens (1989) and Foster (1989). On one hand, mainstreamed students in those studies reported positive attitudes toward their academic achievement in public school and a range of attitudes toward their social experiences. Although students

who were mainstreamed with other hearing impaired students enjoyed positive social experiences, the quality of their socialization with their hearing schoolmates was comparatively low. Those who were the only hearing impaired students in their schools reported less positive attitudes toward their socialization. On the other hand, hearing impaired students in residential schools reported being less satisfied with the level of their academic work; however, they were positive about their socialization with their hearing impaired peers. Comparatively few residential students reported having hearing friends. At Edison, the hearing impaired students achieved academically at appropriate levels of challenge. They enjoyed their deep social relationships with other hearing impaired students, and also the opportunities to associate regularly with their hearing schoolmates.

Loeb and Sarigiani (1985) reported that hearing impaired students in Detroit public schools had lower self-esteem than their hearing peers. Those hearing impaired students reported having difficulty making friends and being included in activities with hearing students. They also detected lower expectations for their academic performance, and perceived weaknesses in their academic achievement. In contrast, students at Edison were generally successful in and satisfied with their academic achievement. They also enjoyed their regular inclusion in routine

team activities and special events. The level of cooperation and understanding between Mrs. Brooks and the students' mainstream teachers contributed substantially toward promoting this level of self-esteem among the hearing impaired students at Edison.

Overall findings from the present study are generally consistent with those from previous studies. The informants at Edison detected differences between themselves and their hearing schoolmates. They sensed that their hearing impairment set them apart from hearing students and at times caused hearing students to devalue them. Consequently, they were hesitant to attempt to develop deeper levels of socialization with their hearing peers. Instead, they tended to form their fullest and most meaningful social relationships with other hearing impaired students. Nonetheless, the informants did derive some measure of satisfaction from social encounters with hearing students. This was especially true for older students in their interactions with hearing students on their interdisciplinary teams and in their participation in team activities.

#### Implications of the Findings for Researchers

The advantages of ethnographic research methods include allowing researchers to examine phenomena that have not previously been studied and to investigate them with a focus that is broad and deep (Lutz & Ramsey, 1974; Vidich, 1955; Wilson, 1977; Wolcott, 1975). Although these methods

result in findings that may raise a variety of topics and directions for further research, the findings are limited in their generalizability (Kirk & Miller, 1986; Magoon, 1977). The findings from this study raise several issues that may have implications for other researchers whose interests are in the social development of hearing impaired early adolescents.

First, these findings suggest that the informants were engaged in a high level of socialization within their unique social context. These findings resulted from the application of intensive qualitative research methods, particularly participant observation and in-depth interviews. Because it is risky to generalize these findings, and because no similar prior research has been conducted using these methods, the first set of implications of the findings is quite obvious. Would intensive qualitative study of a group of hearing impaired early adolescents in a public middle school yield results that are similar to the findings from this study? That is, do other hearing impaired students engage in sophisticated social interactions in similar circumstances? If so, what specific features of their interactions are prominent, and what is the fundamental purpose of their socialization?

Certain findings from this study suggest that the primary and secondary features of hearing impairment interacted to compound their adverse effects on the

communication of the informants. In particular, the informants' perceptions of their differences from hearing students increased their reluctance to interact with their hearing schoolmates. Further research is needed to determine whether this phenomenon is common among other similar hearing impaired students. If so, would specific intervention strategies desensitize hearing impaired students and improve the quality and frequency of their interactions with their hearing peers?

The findings from this study indicate that intensive qualitative research methods can be used with hearing impaired early adolescents, and that additional studies of this type are needed. Other researchers have also stated the need for more qualitative studies of hearing impaired students (Foster, 1989; Moores, 1978; Saur et al., 1986; Weiss, 1986). Two particular research procedures employed in this study may prove valuable in future qualitative studies of hearing impaired early adolescents.

First, the review of the literature indicated that there is some sense among researchers in the area of hearing impairment that in-depth interviews are most productive only when used with older informants. In the present study, in-depth interviews were used successfully with hearing impaired early adolescents. The data they yielded were abundant and trustworthy, and were obviously indispensable to this study.

Second, participant observation includes the collection of accurate accounts of informants' communicative exchanges. Attending to and recording the form of the conversations was of critical importance to this study. Informants conversed using speech, signs, fingerspelling, and lipreading, alone and in combination. Close attention to these acts indicated that the informants were applying a set of rules in order to judge the needs of their communication partners. Pursuit of this question suggested that the informants indeed possessed such knowledge and that they could explain the means they used to discriminate their partners' needs.

The final implication of these findings for future research concerns the application of Berger and Luckman's (1967) theory of secondary socialization. As suggested above, this theory proved valuable in strengthening the conclusion that the informants in the study were engaged in a high level of socialization.

#### Implications of the Findings for Practitioners.

The practice of placing hearing impaired students in public schools and mainstreaming them into regular classes has increased dramatically since the enactment of PL 94-142. Prior to the implementation of this legislation, the majority of hearing impaired students attended residential schools; now the reverse is true (Moores, 1987). The middle school concept has also gained popularity in the



past 2 decades. Recent information indicates that there were approximately 12,000 middle schools in operation in 1988 ("Recognition of," 1988). These trends imply that increasing numbers of hearing impaired students are being mainstreamed into public middle schools. Therefore, findings from the present study may be of value to educational leaders in middle schools, middle school teachers, teacher educators, and specialists in curriculum development who have professional interests in these two educational areas. In any case, the caveat applies that it may be risky to generalize the findings from this study.

The findings from this study might prove to be of value to teachers, particularly those who teach hearing impaired students in middle schools. Certain findings may be more relevant for teachers who have self-contained classes from which hearing impaired students are partially mainstreamed. Other findings might be of interest to regular teachers who teach mainstreamed hearing impaired students in their classes.

For special teachers of the hearing impaired, findings regarding the importance of social interactions among hearing impaired students in segregated classes may be revealing. Practical implications include ensuring that hearing impaired students have ample opportunities to interact in such contexts. Informants perceived that hearing people held negative attitudes toward some

conditions of hearing impairment. This ascription compounded social interactions between the informants and their hearing schoolmates. If other hearing impaired students hold similar perceptions, teachers might find ways to desensitize their students in order to improve the socialization between the two types of students.

The findings also suggest that cooperation between special teachers of the hearing impaired and the students' mainstream teachers is valuable. Teachers in programs where teacher cooperation is less well developed might find it profitable to improve communication and cooperation.

Findings also revealed the importance of communication between teachers and parents. Informants experienced occasional difficulties in communicating certain information about school events and personal concerns to their parents, and teacher intervention was appropriate and valuable.

Regular teachers who have hearing impaired students mainstreamed into their classes might consider other findings to be informative. Improving teachers' level of general knowledge about hearing impaired students' perceptions might increase their sensitivity to these students' needs. It might also be necessary and helpful to increase hearing students' sensitivity to the nature and needs of their hearing impaired schoolmates.

Principals and other school administrators are often in a better position to examine overall conditions in their programs and to effect important changes within them. Research indicates that educational leaders are generally approving of mainstreaming hearing impaired students into regular classes, but that their knowledge of hearing impairment is low (Brill et al., 1986). Findings from this study might serve to further inform educational leaders of the educational needs of hearing impaired students in their programs. The findings discussed above in terms of their of potential value for teachers would also apply here. Should conditions exist that impede teacher cooperation or teacher-parent communication, certain programmatic changes might be undertaken. The need may exist to restructure programs to encourage a greater degree of interaction between hearing impaired students and their schoolmates. The findings suggest that interdisciplinary teams and AA groups were important to informants. Should these practices not be in operation, or should hearing impaired students' participation in them be limited, correcting these deficiencies may prove beneficial.

Teacher educators and prospective teachers might benefit from knowledge that some of these findings add to the enterprise of teacher preparation. Education majors who aspire to teach hearing impaired or regular students may profit from advance knowledge of the social phenomena

revealed in these findings. The findings that were discussed as potentially relevant for practicing teachers would also apply here.

Finally, specialists in curriculum development may consider some of the findings useful. The development of specific activities to promote interaction between hearing impaired students and their hearing schoolmates might be especially beneficial. Similarly, activities that improve certain attitudes held by both hearing impaired and hearing students might be developed.

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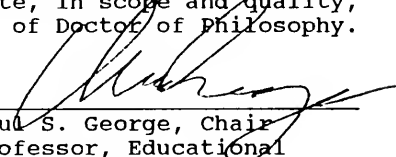
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### BIOGRAPHICAL SKETCH

Paul B. Crutchfield, Jr., was born in Morganton, NC, in 1946. His father was deaf, and both his parents taught at the North Carolina School for the Deaf. The researcher was educated in the Morganton City Schools and was graduated from high school in 1964. He attended the University of the South for his baccalaureate studies. He majored in French and was graduated in 1968 with the B.A. degree. From 1968 to 1970, he attended Gallaudet College (now Gallaudet University), where he received the M.A. degree with a specialization in secondary English education for the hearing impaired.

The researcher taught English to hearing impaired students at the Florida School for the Deaf and Blind in St. Augustine from 1970 until 1972. During the 1972-1973 school year, he taught first-grade hearing impaired students in an open classroom at the Central North Carolina School for the Deaf in Raleigh. He returned to the Florida School for the Deaf and the Blind in fall of 1973 and taught there until the spring of 1978. In the fall of 1978, he took a position in the Education Department at Flagler College, where he currently teaches courses in teacher preparation.

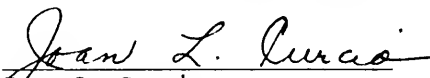
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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Paul S. George, Chair  
Professor, Educational  
Leadership

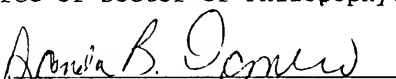
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Joan L. Curcio  
Assistant Professor,  
Educational Leadership

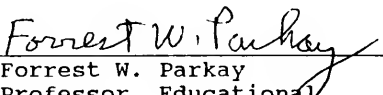
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Professor, Foundations of  
Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May, 1991

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